A TEACHING AND LEARNING PROGRAMME TO ADDRESS LEARNING STYLE DIVERSITY IN AN INCLUSIVE LIFE ORIENTATION CLASSROOM SETTING

PHINDIWE ALETTA MOTLOUNG

M.ED. (NORTH-WEST UNIVERSITY)

HONS B.ED. (UNISA)

B.A., PGD, PPM (UNISA)

SPTD (MAPULANENG COLLEGE OF EDUCATION)

A thesis submitted in fulfilment of the requirements for the degree

PHILOSOPHIAE DOCTOR

in

Learning and Teaching

at the

VAAL TRIANGLE CAMPUS

of the

North-West University

Promoter: Prof. M.M. Grosser

Vanderbijlpark

2011

TO WHOM IT MAY CONCERN

This is to certify that the undersigned has done the language editing for the following candidate:

SURNAME and INITIALS: MOTLOUNG, P.A.

DEGREE: ~~MEd dissertation~~ / PhD thesis

D Kocks Date: 8 Sept. 2011

Denise Kocks

NOTE WELL: **The language editor does not accept any responsibility for post-editing, re-typing or re-computerising of the content.**

Residential address: 29 Broom Street
Arcon Park

Postal address: P.O. BOX 155
Vereeniging 1930

Tel: 016 428 4358

DECLARATION

I, PHINDIWE ALETTA MOTLOUNG declare that A TEACHING AND LEARNING PROGRAMME TO ADDRESS LEARNING STYLE DIVERSITY IN AN INCLUSIVE LIFE ORIENTATION CLASSROOM SETTING is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Student:

Signature: _____

Date: _____

Promoter:

Signature: _____

Date: _____

DEDICATION

THIS WORK IS DEDICATED TO MY LATE PARENTS, Hendrick and Maria Maya, who always had faith in me and in everything, I did. I also dedicate this work to my father and mother- in-law, Mr Peter and Mrs Monica Motloung, my husband Rev. Dr Meshack and my daughters, Abigail, Priscilla and Lerato who worked hard to assist me in typing this thesis, as well as to my only son Meshack Jnr, who supported me throughout my studies.

ACKNOWLEDGEMENTS

I sincerely extend my thanks to

- God, my heavenly Father, whose constant love and mercy carried me through the study.
- My honourable and highly knowledgeable supervisor and promoter, Professor M.M Grosser, for supporting and guiding me throughout the study. Thank you, Professor, for holding my hand and advising me throughout the research process.
- Mrs Denise Kocks for the professional language editing of the thesis.
- Mrs Aldine Oosthuyzen for technically editing the document.
- Thanks to all educators who granted me the opportunity to conduct this research and participated in the focus group interviews and classroom observations.
- The staff of the North West Library for the professional and friendly manner in which they supported me. A special word of thanks to Mr Danny Moloto, who assisted me whole heartedly.
- My Husband, Rev. Dr Meshack, my beautiful daughters, Abigail, Priscilla, Lerato and my only beloved son Meshack (Jnr) for their full support in this study. Thank you for being patient and prayerfully understanding when you had to do without a wife and motherly support. May my success generate more happiness, motivation, glory and praise to God our father.

SUMMARY

The purpose of the study was to gauge Grade 4 Life Orientation educators' understanding of what learning style diversity entails, and to explore how they accommodate diverse learning styles during teaching and learning in inclusive Life Orientation classrooms. The study explored the educators' choice of teaching methods and strategies, learning activities and assessment approaches to accommodate diverse learning styles in their classrooms.

The first phase of the study was characterized by a literature review, which guided the formulation of focus group interview questions as well as observation criteria. The literature review explored the notion of accommodating diverse learning style needs as an important aspect of inclusive education, as well as the teaching methods and strategies, learning activities and assessment approaches that could be employed to accommodate learning style diversity in inclusive Life Orientation classrooms.

The second phase of the study comprised the empirical research. Within an interprevistic framework, qualitative research by means of focus group interviews and observations was undertaken to collect data in order to determine educators' understanding of learning style diversity and to explore how they accommodate diverse learning style needs in their inclusive Grade 4 Life Orientation classrooms. Focus group interviews were conducted with a convenient and purposively selected sample of Grade 4 Life Orientation educators (n=40) who teach at Township schools in the Sedibeng West District of the Gauteng Department of Education. In addition to the focus group interviews, observations were done in the classrooms of five willing educators who took part in the focus group interviews to observe how the educators accommodate diverse learning style needs in practice during their teaching.

The data analysis revealed that educators do not have an adequate understanding of what diverse learning style needs imply, and do not

accommodate diverse learning style needs in a balanced way in their classrooms. Both the findings from the focus group interviews and observations indicated that educators experience challenges in accommodating diverse learning style needs during the teaching of Grade 4 Life Orientation in inclusive classrooms. These challenges *inter alia* relate to time, workload, overcrowded classrooms and a need for guidance on how to accommodate diverse learning style needs. Based on the data obtained, examples of teaching, learning and assessment activities that could form part of a teaching and learning programme for Grade 4 Life Orientation was developed to guide educators in addressing learning style diversity during teaching. In the absence of curriculum-based teaching and learning programmes that guide educators in accommodate diverse learning styles during the teaching of Life Orientation, this study makes a valuable contribution.

Key concepts: learning style diversity, learning preferences, pedagogical barriers to learning, inclusive education

TABLE OF CONTENTS

DECLARATION ..... **iii**

DEDICATION ..... **iv**

ACKNOWLEDGEMENTS ..... **v**

SUMMARY ..... **vi**

TABLE OF CONTENTS ..... **viii**

LIST OF TABLES ..... **xx**

LIST OF FIGURES ..... **xxii**

CHAPTER 1 ..... **1**

ORIENTATION AND STATEMENT OF THE PROBLEM **1**

1.1 INTRODUCTION **1**

1.2 PROBLEM STATEMENT **3**

1.3 CONCEPTUAL FRAMEWORK **4**

1.4 RESEARCH QUESTIONS **7**

1.5 AIM AND OBJECTIVES **8**

1.6 METHOD OF RESEARCH **10**

1.6.1 Literature study **10**

1.6.2 Empirical study **10**

1.6.2.1 Research paradigm 10

1.6.2.2 Research design 11

1.6.2.3 Research strategy 11

1.6.2.4 Participants 12
1.6.2.5 Data collection....13
1.6.2.6 Data analysis....16
1.6.2.6.1 Data analysis for focus group interview 16
1.6.2.6.2 Data analysis for the observations 17
1.6.2.7 Quality criteria 17
1.6.2.8 Ethical considerations 17
1.7 CONTRIBUTION OF THE STUDY....18
1.7.1 Contribution to subject field 18
1.8 CHAPTER DIVISION 18
1.9 CHAPTER SUMMARY....18
CHAPTER 2 20
INCLUSIVE EDUCATION AND CLASSROOM PRACTICE 20
2.1 INTRODUCTION....20
2.2 INCLUSIVE EDUCATION: A CONCEPT CLARIFICATION 20
2.3 THE DEVELOPMENT OF INCLUSIVE EDUCATION....23
2.3.1 The historical development of inclusive education 23
2.3.2 International development arena....24
2.3.3 The South African development arena....25
2.3.3.1 Medical discourse....25
2.3.3.2 Charity discourse....25

2.3.3.3 Lay discourse 26

2.3.3.4 Social rights discourse 26

2.4 THE INCLUSIVE SCHOOL 30

2.4.1 The inclusive Life Orientation classroom in an inclusive school 30

2.4.2 Factors that influence the success of inclusion 32

2.4.3 Challenges faced by educators in inclusive classrooms 37

2.5 TEACHING IN INCLUSIVE CLASSROOMS TO AVOID PEDAGOGICAL BARRIERS TO LEARNING 39

2.6 CHAPTER SUMMARY 40

CHAPTER 3 42

DIVERSE LEARNING STYLE NEEDS IN INCLUSIVE CLASSROOMS 42

3.1 INTRODUCTION 42

3.2 LEARNING STYLE NEEDS 42

3.3 LEARNING STYLE MODELS 44

3.3.1 The learning style model of Kolb 44

3.3.2 The learning style model of Dunn and Dunn 45

3.3.3 The Myers Briggs Type of Indicator Model of Learning Styles 46

3.3.4 The Hermann Brain Dominance Instrument Classification 46

3.3.5 The Felder-Silverman Learning Style Model 47

3.3.6 The learning style model of Leider 48

3.3.7 The learning style model of Schurr 48

3.3.8 The learning style model of Rosenberg 49

3.3.9 The learning style model of Armstrong 49

3.3.10 The learning style model of Honey and Mumford 50

3.3.11 The Gregorc learning style theory 51

3.3.12 The cognitive style model of Riding and Dauglas 52

3.3.13 Field-dependent and field-independent learners 52

3.4 THE IMPORTANCE OF ADRESSING LEARNING STYLE NEEDS 54

3.5 DETERMINING THE LEARNING STYLE NEEDS OF LEARNERS 56

3.6 TEACHING METHODS AND STRATEGIES TO ACCOMMODATE LEARNING STYLE DIVERSITY 57

3.6.1 Direct Teaching Method 57

3.6.2 Indirect Teaching Method 60

3.6.3 Independent Teaching Method 62

3.6.3.1 Questioning 63

3.6.3.2 Discussion 64

3.6.3.3 Problem-solving 64

3.6.3.4 Projects 65

3.6.4 Interactive Teaching Method 66

3.7 LEARNING ACTIVITIES TO ACCOMMODATE LEARNING STYLE NEEDS....68

3.7.1 Convergers (Sensors and Feelers) and learning activities 70

3.7.2 Divergers (Watchers) and learning activities 70

3.7.3 Assimilators (Thinkers) and learning activities....71

3.7.4 Accommodators (Doers) and learning activities....71

3.8 ASSESSMENT APPROACHES TO ACCOMMODATE LEARNING STYLE NEEDS....72

3.8.1 Assessment of learning....72

3.8.2 Assessment for learning 74

3.9 BALANCING TEACHING, LEARNING AND ASSESSMENT 78

3.10 ACCOMMODATING LEARNING STYLE NEEDS IN LIFE ORIENTATION....83

3.10.1 Introduction....83

3.10.2 The purpose of Life Orientation....83

3.10.2.1 The scope and characteristics of Life Orientation....84

3.10.3 Teaching methods, strategies and activities for Life Orientation....85

3.10.4 Assessment strategies appropriate for Life Orientation 87

3.11 CHAPTER SUMMARY....89

CHAPTER 4 91

EMPIRICAL RESEARCH DESIGN 91

4.1 INTRODUCTION 91

4.2 AIM AND OBJECTIVES OF THE STUDY 91

4.3 RESEARCH PARADIGM 93

4.3.1 Positivist paradigm 93

4.3.2 Post-positivist paradigm 94

4.3.3 Interpretivist paradigm 94

4.3.4 Critical theory 95

4.3.5 Pragmatist paradigm 95

4.4 EMPIRICAL RESEARCH DESIGN 96

4.4.1 Literature review 96

4.4.2 Research design 97

4.4.2.1 Qualitative research 97

4.4.2.2 Quantitative research 98

4.4.2.3 Mixed method research 98

4.4.3 Research strategy 99

4.4.3.1 Phenomenological research strategy 99

4.5 METHODS OF DATA COLLECTION 100

4.5.1 Interviews 100

4.5.1.1 Types of interviews 100

4.5.1.2 Focus group interviews 102

4.5.1.3 Research participants 110

4.5.1.4 Data analysis procedure for focus group interviews 112

4.5.1.5 Trustworthiness of focus group interview data 115

4.5.1.6 The role of the researcher in qualitative research 117

4.5.2 Observations 119

4.5.2.1 The purpose of using observation in research 120

4.5.2.2 Types of observation 120

4.5.2.3 The focus of observations: what to observe 121

4.5.2.4 The structure of the observation schedule 122

4.5.2.5 Arranging observations with the participants 122

4.5.2.6 Recording of observations 123

4.5.2.7 Reflective notes 124

4.5.2.8 Advantages and disadvantages of observations 124

4.5.2.9 Participants for the observation 125

4.5.2.10 Data analysis for the observations 125

4.5.2.11 Trustworthiness of the data analysis for the observation 125

4.5.2.12 Triangulation 127

4.6 ETHICAL CONSIDERATIONS 127

4.6.1 Ethical issues in the research problem 127

4.6.2 Ethical issues in the purpose and questions 128

4.6.3 Ethical issues in data collection 128

4.6.4 Ethical issues in data analysis and interpretation 129

4.6.5 Ethical issues in writing and disseminating the research....129

4.7 CHAPTER SUMMARY....129

CHAPTER 5 131

DATA ANALYSIS AND INTERPRETATION....131

5.1 INTRODUCTION....131

5.2 BIOGRAPHIC INFORMATION OF THE PARTICIPANTS....132

5.3 DATA ANALYSIS FOR FOCUS GROUP INTERVIEWS....137

5.3.1 Data analysis: understanding of diverse learning styles....137

5.3.2 Data analysis: types of learning styles accommodated during teaching....141

5.3.3 Data analysis: ways of accommodating diverse learning styles....147

5.3.4 Data analysis: the use of teaching methods....150

5.3.5 Data analysis: learning activities....156

5.3.6 Data analysis: assessment....158

5.3.7 Data analysis: the effects of using one teaching method....161

5.3.8 Data analysis: the effects of using one type of learning activity....164

5.3.9 Data analysis: the effect of using one type of assessment method....167

5.3.10 Data analysis: using different teaching methods and strategies to accommodate diverse learning styles in inclusive Life Orientation classrooms....170

5.3.11 Data analysis: providing different activities for diverse learning style needs 173

5.3.12 Data analysis: the use of different assessment methods and strategies....176

5.3.13 Data analysis: feelings about accommodating diverse learning style needs 179

5.3.14 Field notes....182

5.4 DATA ANALYSIS FOR THE OBSERVATIONS....182

5.4.1 Observation: Learning styles....190

5.4.2 Observation: Teaching methods and strategies....192

5.4.3 Observation: Learning activities 195

5.4.4 Observation: Assessment methods and strategies....196

5.5 ADDITIONAL THEMES EMERGING FROM THE DATA ANALYSIS OF THE FOCUS GROUP INTERVIEWS AND THE OBSERVATIONS....198

5.6 TRIANGULATION OF THE INTERVIEW AND OBSERVATION DATA 199

5.7 CHAPTER SUMMARY....205

CHAPTER 6 206

A TEACHING AND LEARNING PROGRAMME TO ADDRESS LEARNING STYLE DIVERSITY IN AN INCLUSIVE GRADE 4 LIFE ORIENTATION CLASSROOM SETTING 206

6.1 INTRODUCTION....206

6.2 DETERMINING LEARNING STYLE PREFERENCES 206

6.3 TEACHING LIFE ORIENTATION 210

6.3.1 Knowledge of learners is crucial 210

6.3.2 Knowledge and understanding of the Life Orientation content 211

6.3.3 Availability of resources should be ascertained 211

6.3.4 Gender sensitivity 211

6.3.5 Assessment tasks for Life Orientation 211

6.3.6 Learning Outcomes and Assessment Standards 211

6.3.6.1 Learning outcome 1: Health promotion 211

6.3.6.2 Learning outcome 2: Social development 212

6.3.6.3 Learning outcome 3: Personal development 212

6.3.6.4 Learning outcome 4: Physical development and movement 213

6.3.7 Learning Outcomes and their weighting 213

6.3.8 The major teaching methods with various teaching strategies to be used during the teaching of Life Orientation 213

6.4 A TEACHING AND LEARNING PROGRAMME FOR LIFE ORIENTATION 218

6.4.1 Theoretical framework of the teaching and learning programme 218

6.4 CHAPTER SUMMARY 238

CHAPTER 7 239

SUMMARY, FINDINGS AND RECOMMENDATIONS 239

7.1 INTRODUCTION 239

7.2 AN OVERVIEW OF THE STUDY 239

7.2.1 Chapter 1 240

7.2.2 Chapter 2 240

7.2.3 Chapter 3 241

7.2.4 Chapter 4 243

7.2.5 Chapter 5 243

7.2.6 Chapter 6 243

7.3 FINDINGS FROM THE LITERATURE REVIEW 244

7.4 FINDINGS FROM THE EMPIRICAL RESEARCH 247

7.5 FINDINGS IN RELATION TO THE AIM AND OBJECTIVES OF THE STUDY 256

7.6 LIMITATIONS OF THE STUDY 261

7.7 RECOMMENDATIONS 262

7.8 SUGGESTIONS FOR FURTHER RESEARCH 266

7.9 CONTRIBUTION OF THE STUDY TO THEORY 267

7.10 CONTRIBUTION OF THE STUDY TO PRACTICE 268

7.11 CONCLUSION 269

BIBLIOGRAPHY 270

APPENDIX A 289

PERMISSION FROM GAUTENG DEPARTMENT OF EDUCATION 289

APPENDIX B 292
LETTERS OF CONSENT 292
APPENDIX C 295
INTERVIEW PROTOCOL 295
APPENDIX D 298
EXAMPLE OF OBSERVATION SCHEDULE AND RUNNING RECORD 298
APPENDIX E 306
CODING OF INTERVIEW DATA 306
APPENDIX F 393
SUMMARY OF THEMES 393
APPENDIX G 408
ETHICAL CLEARANCE 408
APPENDIX H 410
SEQUENCING OF ACTIVITIES 410

LIST OF TABLES

Table 2.1: Benefits of inclusion 36

Table 3.1: Techniques/strategies for the Direct Teaching Method 58

Table 3.2: Techniques/strategies for the Indirect Teaching Method 61

Table 3.3: Techniques/strategies for the Independent Teaching Method 63

Table 3.4: Techniques/strategies for the Interactive Teaching Method (Grosser, 2001: 52, Maja, 2006:51-52) 66

Table 3.5: Learning styles and learning activities 69

Table 3.6: A balanced approach to teaching, learning and assessment (adapted from Grosser & De Waal, 2006:21) 81

Table 3.7: Teaching methods and strategies to address diverse learning styles 85

Table 5.1 Reports on the gender of the research participants. 132

Table 5.1: Gender of the participants 132

Table 5.2: Age of the participants 133

Table 5.3: Teaching experience in education (number of years in teaching) 133

Table 5.4: Teaching experience in the GET Phase: (number of years in the Phase) 134

Table 5.5: Teaching experience in the grade: (number of years teaching Grade 4 learners) 134

Table 5.6: Teaching experience in Life Orientation Grade 4 135

Table 5.7: Position of participants 136

Table 5.8: Qualification of participants..... 136

Table 5.9: Summary of teaching methods and strategies used..... 151

Table 5.10: Summary of learning activities used 156

Table 5.11: Summary of assessment methods and strategies used 159

Table 5.12: Observation context 1..... 183

Table 5.13: Observation context 2..... 184

Table 5.14: Observation context 3..... 186

Table 5.15: Observation context 4..... 187

Table 5.16: Observation context 5..... 189

Table 5.17: Summary of data obtained : focus group interviews and observations 204

Table 6.1: Learning Style Inventory Statements (Kolb, 1981) 207

Table 6.2: Major teaching methods and teaching strategies 214

Table 6.3: Major learning styles with preferred learning activities 215

Table 6.4: Major learning styles with preferred assessment methods . 216

Table 6.5: Major learning styles with preferred learning processes 217

LIST OF FIGURES

Figure 5.1: Understanding of learning style needs 139

Figure 5.2: Types of learning styles accommodated 145

Figure 5.3: Teaching to accommodate diverse learning style needs 149

Figure 5.4: Effects of using one type of teaching method 163

Figure 5.5: Effects of using one type of activity on a constant basis. 166

Figure 5.6: Effects of using one type of assessment method 169

Figure 5.7: Opinion regarding the use of different teaching methods ... 172

Figure 5.8: Opinion regarding giving different learning activities for diverse learning styles 175

Figure 5.9: Opinions regarding the use of different assessment methods 178

Figure 5.10: Feeling about accommodating diverse learning styles 181

Figure 6.1: The learning cycle (Kolb, 1981) 208

Figure 6.2: The learning style quadrants (Kolb, 1981) 210

Figure 6.3: Learning outcome 1: Health Promotion 220

Figure 6.4: Learning outcome 1: Personal development 226

CHAPTER 1

ORIENTATION AND STATEMENT OF THE PROBLEM

1.1 INTRODUCTION

The Department of Education in South Africa accepted the inclusive education policy for all schools in July 2001 (SA, 2001:8). Inclusion is about accommodating the needs of all learners, irrespective of disability and cultural and socio-economic background (SA, 2001:6; Mtshali, 2005:1). Furthermore, inclusion refers to a change in attitude, behaviour, teaching and assessment methods, curricula and teaching and learning environments to accommodate all learners, as well as maximizing the participation of all learners (SA, 2001:6,7; Babane, 2002:13). What is needed is that educators come to understand the wide range of barriers to learning and development experienced by the bulk of learners in their classes (SA, 2001:8). The barriers refer to the following:

- Pedagogical barriers that call for sufficient educator support to all learners, fair assessment procedures, flexible curricula and linking teaching to the preferred learning style of the learner
- Medical barriers that call for attention to sensory disabilities, physical disabilities and cognitive disabilities in the classroom
- Societal barriers that call for support to learners coming from backgrounds characterized by severe poverty, abuse, crime and violence
- Systemic barriers that call for adequate facilities at school, the availability of appropriate teaching and learning support material and proper attention to each learner

If the aforementioned barriers are not accommodated, learners may fail to learn effectively or be excluded from the learning system (SA, 2001:17).

According to Levinrad (2000:14), the importance of accommodating learning style needs is to ensure that all learners receive equitable and equal teaching that will unleash their learning potential. Larkin-Hein (2000:2) and Dasari

(2006:27) emphasize that the accommodation of learning styles in the classroom improves learner interests and motivation to learn, primarily because it allows for alternative teaching strategies designed to accommodate a diverse population of learners. Educators must therefore set different tasks to accommodate learners with different learning capabilities so that they all experience success.

According to Van Rensburg (2002:13) and Kruger (1998:107), the accommodation of learning styles is critical for increasing learner capacity and motivation to learn, and improving the internalizing and remembering of information.

The literature is unanimous about the importance of the educator for successful inclusion initiatives (Avramidis, Bayliss & Burden 2000:210; Daane, Beirne & Lathan, 2000:253; Lomofsky & Lazarus, 2001:84). In this regard, Avramidis *et al.* (2000:192), as well as Swart, Pettipher, Engelbrecht, Eloff Oswald, Ackerman and Prozesky (2002:175), assert that educators have inadequate knowledge, skills and training for effective implementation of inclusive education, which might also imply that accommodating diverse learning style needs during teaching is problematic.

A literature search on recent completed national and international studies between 2000 and 2010 in the field of learning style needs, revealed the following:

A number of studies focused on accommodating learning style needs in Higher Education or at University level (Maree, 2000; Van Rensburg, 2002; Gauss, 2002; Cloete, 2005; Vawda, 2005; Tsvigu, 2008). One study focused on the influence that learning style needs has on achievement in Grade 6 Science classrooms (Dasari, 2006), and three studies explored the relationship between learning styles and performance in English Second Language classrooms (Cekiso, 2000; Hom, 2002; Conner, 2003). Levinrad (2000) explored trends in learning styles related to multi-cultural classrooms. A study conducted by Maja (2006) explored the accommodation of learning style diversity in the Natural Science classroom at Secondary School Level.

Several studies explored the relationship between learning styles, ethnicity, gender and academic achievement (Ulubabova, 2003; Honigsfeld, 2005; McGraw, 2005; Reese, 2005; Davis, 2007; Smith, 2008; Swindell, 2010). In addition to these studies, Gifford (2004) and Kise (2004) examined the relation between educator beliefs, classroom practice and accommodating learning styles.

A study conducted by Grosser and De Waal (2006:17-31) and De Waal and Grosser (2009:705) in one District of the Gauteng Department of Education, revealed that learners do not perceive the classroom practice of their educators compatible with their pedagogical needs, and educators appear not to be empowered to accommodate the pedagogical needs of their learners. No studies that document research related to learning style needs in the field of Life Orientation at school-level, could be located.

Linked to the study of Gifford (2004), Kise (2004), Grosser and De Waal (2006) and De Waal and Grosser (2009) the present study set out to confirm or refute the research findings of Grosser and De Waal (2006) and De Waal and Grosser (2009) by conducting research in another District of the Gauteng Department of Education. Furthermore, the present study extended the studies of Gifford (2004), Kise (2004) and Maja (2006) by designing a curriculum-based teaching and learning programme for Life Orientation to illustrate how classroom practice can be linked to learning style needs.

1.2 PROBLEM STATEMENT

Based on the above, and the fact that no empirical evidence could be found in the literature indicating how learning style diversity is presently dealt with in the Life Orientation classroom, I [1] aimed to probe educators' understanding of diverse learning style needs, and explore how they accommodated diverse learning style needs in inclusive Grade 4 Life Orientation classroom settings. By understanding what educators presently do to accommodate learning style

[1] In the context of the study that was qualitative in nature, I preferred the use of the personal pronoun to emphasize my personal involvement as researcher

needs, recommendations can be made to improve current classroom practice. Based on the findings of the research, examples of teaching, learning and assessment activities that form part of a curriculum-based teaching and learning programme was designed to assist educators to accommodate the learning style needs in an inclusive Life Orientation classroom effectively.

The Life Orientation classroom was selected because as a former Grade 4 Life Orientation educator, Head of Department and presently a Coordinator for Multimedia Learning and Teaching Support Material, I am familiar with the content and Learning Outcomes. My familiarity with the content and Learning Outcomes would enable me to engage effectively with the design of a teaching and learning programme. Furthermore, the subject content of Life Orientation holds the possibility of empowering learners to achieve their full physical, intellectual, personal, emotional and social potential. The wide variety of content makes it possible for educators to accommodate variety in their instructional practice.

1.3 CONCEPTUAL FRAMEWORK

The study was conceptualized in terms of the following conceptual frameworks: inclusive education, learning style diversity, teaching methods and strategies, learning activities and assessment approaches to accommodate learning style needs. A brief explanation of each of the concepts are now provided to demarcate the present study.

Inclusive education

Inclusion, as explained in the policy, is about recognizing and respecting the differences among all learners and supporting all learners so that the full range of learning needs, which refer to learners' preferences to study and learning in a particular way, are accommodated (SA, 2001:17). The focus is on the development of good teaching strategies that will be of benefit to all learners. Inclusion is about including everyone, regardless of ability, gender, language or disability, so that all learners can belong at school and conditions are created by educators to enable them to achieve the educational outcomes

that schools offer (Mittler, 2000:10; Thomas & Loxley, 2001:118; Lomofsky & Lazarus, 2001:306).

It is specifically with regard to how to accommodate diverse learning style needs during the teaching of Life Orientation at Grade 4-level, that this research attempts to make a contribution.

Learning style diversity

Literature highlights a number of models that describe the diverse learning style needs that educators may come across in classrooms. **Kolb** (1984:199) classifies learning styles as concrete experience, reflective observation, abstract conceptualization and active experimentation. **Dunn and Dunn's** learning style model, as mentioned by Lovelace (2005:177), indicates five basic stimuli that affect an individual's ability to master new and difficult academic information and skills. **The Myers Briggs Type Indicator model of learning styles** classifies learners on their preferences on scales derived from psychologist Carl Jung's theory of psychological types (Lawrence, 1994:124), indicating that learners may be Extraverts, Sensors, Thinkers or Judgers. The **Hermann Brain Dominance Instrument (HBDD)** (Hermann, 1990:66) classifies learners in terms of their relative preferences for thinking in four different modes that are based on the task-specialized functioning in the brain, which could be upper left or right brain or lower left or right brain. The **Felder-Silverman Learning Style Model** (Felder, 1996:20) classifies learners as being sequentially active, sentient, or inductive. In the context of the study, the framework of Kolb (1984:199) guided the conceptualization of learning style diversity as the following: Convergers (Sensors/Feelers), Divergers (Watchers), Assimilators (Thinkers) and Accommodators (Doers).

Teaching methods and strategies to accommodate learning style needs

According to Mabena (2004:15), teaching methods are broad plans of action for teaching learning activities with the idea of achieving one or more outcomes. Each method furthermore encompasses a variety of teaching strategies, which can be Direct, Indirect, Independent and Interactive in nature. Each of these methods links well with a particular learning style needs

of learners (Schraw & Olafson, 2003:185). In the context of the study, I looked for evidence to support the fact that educators utilize the four above-mentioned teaching methods in a balanced way during teaching.

Learning activities to accommodate learning style needs

According to Van Rensburg (2002:179), learning activities are those activities that take place when learning is occurring. They include small group discussions, creative problem-solving, role-playing, brainstorming and projects. A variety of teaching approaches and strategies IS involved in performing these activities. Pintrich and Johnson (1996:83) point out that the crucial aspect for performing learning activities is knowledge of one's own cognition and motivation. They mention that the characteristics of how a learner learns have an influence on what the learner learns and how well he or she adapts to the learning environment. This will have an effect on how the learner performs during a learning activity. In line with the view of Van Rensburg (2002:179), I support the argument that the teaching and learning environment must be organized in such a way that it enhances and provides a variety of learning activities that match with the different learning styles of learners (Van Rensburg; 2002:179).

Arndt and Underwood (1990:30) advocate that an educational programme should employ teaching and learning activities in the following order:

- Connecting to the learners' concrete experience (Convergers, Sensors/Feelers)
- Providing logical information and opportunities to reflect and think about the information (Divergers/Watchers; Assimilators/Thinkers)
- Providing opportunities to experiment with what has been learned (Accommodators/Doers)

Assessment approaches to accommodate learning style needs

The Department of Education (SA, 2007:7) describes assessment as a continuous planned process of identifying, gathering and interpreting information about the performance of learners. In accommodating diverse

learning styles, assessment approaches also need to respond to diverse learning style needs and preferences, and therefore educators should use a variety of assessment strategies (SA, 2007:7). In addition to tests and research reports, assessment methods that are more holistic and inclusive must also be adopted. These include portfolio assessment, group as well as individual projects, interviews and oral presentations, experiential and applied learner work (Cho & Forde 2001:89). In the context of the study, I looked for a variety of assessment approaches to conclude whether the classroom practices of educators accommodate the diverse learning style needs of learners.

Life Orientation and learning style diversity

The Learning Area Life Orientation was chosen for this study as I am familiar with the teaching of the Learning Area, and I argue that Life Orientation provides numerous opportunities to accommodate all learning styles during the teaching thereof. My argument is based on the following information retrieved from the policy document: according to the Department of Education (SA, 2002:12), the Life Orientation Learning Area is central to the holistic development of learners. It is concerned with the social, personal, intellectual, emotional and physical growth of learners and the interrelatedness of these aspects. In accommodating these aspects, knowledge, skills, values and attitudes are developed to empower learners to make decisions regarding health promotion, social development, personal development, physical development and orientation to the world of work. The nature of the topics that need to be taught in each of these areas allows for a variety of ways to teach and assess the learners so that all learning style needs can be accommodated.

1.4 RESEARCH QUESTIONS

Flowing from the problem statement the following central question guided the execution of the study:

What are educators' understanding of diverse learning style needs and how do they accommodate diverse learning styles during teaching in an inclusive Grade 4 Life Orientation classroom?

Within this central question, the following sub-questions arose:

- What are the different learning style needs that educators have to accommodate during teaching in an inclusive Grade 4 Life Orientation classroom?
- What is educators' understanding of the different learning style needs of learners in an inclusive Grade 4 Life Orientation classroom?
- Which teaching methods and strategies, learning activities and assessment methods and strategies could be utilized to accommodate learning style diversity in an inclusive Grade 4 Life Orientation classroom?
- Which teaching methods and strategies do educators utilize during teaching to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms?
- Which learning activities do educators design to accommodate learning style diversity in an inclusive Grade 4 Life Orientation classroom?
- Which assessment methods and strategies do educators utilize during teaching to accommodate learning style diversity in an inclusive Grade 4 Life Orientation classroom?
- What are educators' perceptions about accommodating learning style diversity in an inclusive Grade 4 Life Orientation classroom?
- Which components and processes can be included in examples of teaching, learning and assessment activities as part of a teaching and learning programme to guide educators to address learning style diversity in an inclusive Grade 4 Life Orientation classroom?

1.5 AIM AND OBJECTIVES

The overall aim of the study was to probe educators' understanding of learning style needs and explore how they accommodate diverse learning

styles during teaching and learning in inclusive Grade 4 Life Orientation classroom settings. Based on the data obtained, examples of teaching, learning and assessment activities that form part of a teaching and learning programme were designed to assist educators to accommodate learning style diversity in an inclusive Grade 4 Life Orientation classroom effectively.

The overall aim was operationalized in the following objectives:

- to determine the different learning style needs that educators need to accommodate during teaching in an inclusive Grade 4 Life Orientation classroom by means of a literature review;
- to gauge educators' understanding of the different learning style needs of learners in an inclusive Grade 4 Life Orientation classroom by means of focus group interviews;
- to establish which teaching methods and strategies, learning activities and assessment methods and strategies could be utilized to accommodate learning style diversity in an inclusive Grade 4 Life orientation classroom by means of a literature review;
- to gain a deeper understanding of the application of teaching methods and strategies utilized during teaching to accommodate learning style diversity in an inclusive Grade 4 Life Orientation classroom by means of focus group interviews and observations;
- to seek clarity on the types of learning activities designed by educators to accommodate learning style diversity during teaching in an inclusive Grade 4 Life Orientation classroom by means of focus group interviews and observations;
- to explore the assessment methods and strategies that educators utilize during teaching to accommodate diverse learning styles in an inclusive Grade 4 Life Orientation classroom by means of focus group interviews and observations;
- to explore educators' perceptions about accommodating learning style diversity in an inclusive Grade 4 Life Orientation classroom by means of focus group interviews; and

- to identify components and processes to be included in examples of teaching, learning and assessment activities to be included in a teaching and learning programme to guide educators to address learning style diversity in an inclusive Grade 4 Life Orientation classroom by means of a literature review.

1.6 METHOD OF RESEARCH

1.6.1 Literature study

Primary and secondary literature sources were reviewed (McMillan & Schumacher 1997:122). The North-West University Library was visited to obtain the literature sources. The following databases were used to conduct the literature search: Eric, EBSCOHOST, SABINET and Dialogue. Key words and phrases that were used to conduct the literature search are *inclusion*, *barriers to learning*, *diverse learning styles*, *pedagogical needs*, *pedagogical barriers*, *curriculum design*, *teaching methods, teaching styles* and *assessment approaches*. During the literature review, themes were identified that guided the structure of chapters Two and Three.

1.6.2 Empirical study

1.6.2.1 Research paradigm

This study was framed within an interpretivistic paradigm (Creswell, 2009:8). This paradigm was chosen as this study strove to understand how educators in their everyday classroom settings construct meaning regarding learning style diversity and explain the events of their worlds related to the choice of teaching methods and strategies, learning activities and assessment approaches to accommodate learning style needs by talking to and observing the research participants. Interpretive research acknowledges that people construct reality and the researcher needs to analyse the participants' discourses (Maree & Van der Westhuizen, 2007:34).

1.6.2.2 Research design

In line with the interpretivist paradigm, a qualitative research design was used to obtain data. Qualitative research wants to answer questions about the complex nature of phenomena with the purpose of describing and understanding the phenomena from the participants' point of view (McMillan & Schumacher, 1997:391; Thomas, 2003b:225; Leedy & Ormrod, 2005:94). The researcher develops a complex, holistic picture, analyses words of participants and conducts studies in a natural setting (Ivankova, Creswell & Plano Clark, 2007:257). According to Thomas (2003a:1), qualitative research is a multi-method in focus, involving an interpretative, naturalistic approach to its subject matter. Qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them. This method of research is social in nature and involves the study of a variety of empirical materials such as case studies, personal experience, introspection, life stories, interviews, observations, historical, interactional and visual tests that describe routine and problematic moments and meanings in peoples' lives (Salkind, 2003:208; Thomas, 2003a:2). I selected this approach, as the aim was to gather information by interacting with selected participants in their natural settings (McMillan & Schumacher, 2006:26).

1.6.2.3 Research strategy

A research strategy is a strategic framework for action that serves as a bridge between the research question and the execution or implementation of the research (Blanch & Durrheim, 1999:29). A research strategy is also a plan that directs the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Blanch & Durrheim, 1999:29; Wiersma & Jurs, 2009:233; Babbie & Mouton, 1995:83). According to McMillan and Schumacher (2006:26), qualitative strategies can be interactive or non-interactive. As I wanted to focus on a lived experience with face-to-face interaction, an interactive phenomenological strategy was chosen. According to Salkind (2003:215) and McMillan and Schumacher (2006:20), an interactive

phenomenological design is an analytical description of social scenes, individuals and groups' shared feelings, beliefs, practices, artefacts, folk knowledge and action. I used this design to collect data through interacting with participants and observing them in their natural classroom settings to gauge their understanding of learning style needs and to explore how they accommodate diverse learning styles in their inclusive Life Orientation classroom settings.

1.6.2.4 Participants

A detailed explanation of how the participants for the study were selected, is provided in Chapter 4 (*cf.* 4.4.1.3; 4.4.2.9). The population for this study comprised all Grade 4 Life Orientation educators. For the purpose of the study, all the primary schools in two clusters of the Sedibeng West District (D8) of the Gauteng Department of Education were identified to take part in the study. Due to time and financial constraints, the D8 District was conveniently chosen.

During my interactions with educators in the evaluation and selection of learning and teaching support materials, I have particularly noticed that the educators who teach in Township schools experience problems related to accommodating diversity in their classrooms. I therefore, purposively (Creswell, 2009:231) decided to focus my research on Grade 4 Life Orientation classrooms in Township schools. In total, 20 primary schools from the two identified clusters in the District were willing to become involved in the research.

Available statistics at the District Office indicated that approximately two educators teach Life Orientation in Grade 4 at a school. In total, 40 educators were approached to take part in the study. The sample comprised a heterogeneous group of experienced and inexperienced male and female educators from primary Township schools in the D8 District of the Gauteng Department of Education.

Interview participants

For the purpose of the interviews, the 40 educators who were approached to take part in the study were grouped to take part in focus group interviews. In total five focus groups were formed with eight participants in each group (*cf.* 5.2). Unfortunately, only 32 of the 40 participants honoured their interview appointments (*cf*. 5.2).

Participants for the observations

One willing participant in each of the focus groups was selected to take part in three structured observation sessions. This implied that five educators were exposed to three observation sessions of 30 minutes each.

1.6.2.5 Data collection

Focus group interviews were used as the primary method of data collection, and the observations were utilized in a secondary role.

Focus group interviews

Focus group interviews were used as a data collection strategy to gather information from participants. The reason for choosing focus group interviews was based on the assumption that group interaction would be productive in widening the range of responses, activating forgotten details of experiences and releasing inhibitions that may otherwise discourage participants from disclosing information (Chaane, 2002:292; Nieuwenhuis, 2007a:90). According to Hoberg (1999:136) and Leedy and Ormrod (2010:159), a focus group is a group discussion among six to twelve participants about a topic of special relevance to a study under the guidance of a moderator. Furthermore, focus group interviews are conducted as open conversations in order to obtain a better understanding of a problem (Babbie and Mouton, 1995:249; McMillan & Schumacher, 1997:453). The interviews were tape-recorded to ensure completeness of the verbal interaction and to provide material for reliability checks (McMillan & Schumacher, 1997:453). After the interviews were transcribed, they were typed. The final transcript contained accurate verbatim

data and the interviewer's notation on non-verbal communication with initial insight and comments to enhance the meaning of the research.

Questions for interviews

I carefully formulated and sequenced questions linked to the purpose of the study in order to elicit a range of responses. Questions were based on reviewed literature and consultation with my promoter and experts in the field of teaching and learning (Greeff, 2002:314). Questions were structured according to the following question types suggested by Patton (in Merriam, 2009:96) to stimulate responses from interviewees, namely:

- Experience and behaviour questions
- Opinion and value questions
- Feeling questions
- Knowledge questions
- Background/demographic questions

How these questions were utilized in the context of the study is clarified in section 4.4.1.2.

The aim of the interviews was to collect data on educators' understanding of learning style diversity, and the teaching methods and strategies, learning activities and assessment approaches that they use during teaching, as well as to explore their perceptions about accommodating learning style diversity in inclusive Grade 4 Life Orientation classroom settings. The interviews took place after school not to interfere with teaching and learning time. Each interview session did not exceed one hour, and on request of the participants, the interviews were conducted in English to accommodate all the participants. Focus groups were formed by clustering educators who teach close to one another in a group, to avoid the inconvenience of travelling long distances.

During the interview, I took field notes regarding the proceedings and captured non-verbal cues about the group dynamics and roles that group members played. The field notes were important, as the oral data could be

combined with the non-verbal data for a richer analysis of the data (Nieuwenhuis, 2007a:92-93).

Observations

After the interviews were conducted, I also used the observation technique to gather qualitative data to enable me to explore and gain a deeper understanding of how educators deal with learning style diversity during teaching. According to Babbie and Mouton (1995:230) and Nieuwenhuis (2007a:83) observation is the systematic process of recording the behavioural patterns of participants, objects and occurrences without necessarily questioning or communicating with them. They further explain that observation is an everyday activity whereby all senses are used (seeing, hearing, touching, smelling and tasting, as well as one's intuition) to gather bits of data. I used the **complete observer** type of observation together with a co-observer. We looked for patterns of learning styles, teaching methods, learning activities and the assessment approaches utilized in the classroom from a distance. We remained uninvolved and did not influence the dynamics of the setting. The recording of the observation was qualitative in nature, but structured according to different categories.

Cohen, Manion and Morrison (2000:306) and Nieuwenhuis (2007a:85) explain structured observation as the identification of predetermined categories of behaviour that a researcher would like to observe. These categories were distilled from the literature and developed into a checklist. I developed a checklist based on teaching methods and strategies, learning activities and assessment approaches that could be utilized in the classroom, and attached a **running record** of what my observations regarding each entailed (Cohen *et al.,* 2000:306). I considered a structured running record for to be the best observation mechanism since, according to Cohen, Manion and Morrison (2007:397-398), a pre-determined and structured observation schedule is more efficient if the observation entails the recording of the *incidence*, *presence* and *frequency* of elements which compare one situation with another. I was not concerned with frequency but with incidence and

presence of a variety of teaching methods and strategies, learning activities and assessment approaches.

I did not utilize a videotape as this might have made participants uncomfortable (Leedy & Ormrod, 2005:145). In order to make sure that the observations would yield valid and trustworthy data, I followed the suggestions made by Leedy and Ormrod (2005:145) and Nieuwenhuis (2007a:84-87), and elaborate on these suggestions in 4.2.2.10

A pilot study was conducted with a group of educators from the population who were not part of the actual study and the District Officials in order to determine the validity of the focus interview questions and the observation schedule (*cf.* 4.4.1.2).

1.6.2.6 Data analysis

1.6.2.6.1 Data analysis for focus group interview

The data was analysed using deductive and inductive approaches. Deductive analysis implies that *a-priori* codes were identified before examining the data. The *a-priori* codes were derived from the literature dealing with the topic (Nieuwenhuis, 2007c:99). According to Thomas (2003a:2), the inductive data analysis approach is a systematic procedure for analysing qualitative data where the analysis is guided by specific objectives. The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data, without restraints imposed by structured methodologies. Other purposes of the inductive approach are to:

- condense extensive and varied raw text data into a brief, summary format;
- establish clear links between the research objectives and the summary findings derived from the raw data to ensure that these links are both transparent and defensible; and
- to develop a model about the underlying structure of experiences or processes which are evident in the text.

I followed the procedures for the inductive analysis of qualitative data as described by Thomas (2003a:5) and Creswell (2009:184-190). The procedures are explored in detail in 4.4.1.4.

The qualitative data was analysed and interpreted thematically. According to McMillan and Schumacher (1997:553), theme analysis describes the specific and distinctive recurring qualities, characteristics, subjects of discourse or concerns expressed.

1.6.2.6.2 Data analysis for the observations

I made use of deductive as well as inductive content analyses of the running records to make meaning of the data obtained from the observations. The deductive data analysis was guided by predetermined categories found in the literature regarding learning style diversity. An inductive data analysis was also utilised by looking for new meaning that emanated from the data self (McMillan & Schumacher, 2006:364). The procedures employed for the qualitative data analyses are explained in detail in Chapter Four (*cf.* 4.4.2.10).

1.6.2.7 Quality criteria

In order to enhance the trustworthiness of the study, I complied with criteria for credibility, transferability, conformability and dependability. How I complied with the criteria in the context of the study, is explained in detail in Chapter 4 (*cf.* 4.4.2.11, 4.4.2.12). I made use of methodological triangulation to enhance the trustworthiness of the study (Cohen *et al.,* 2007:140-142).

1.6.2.8 Ethical considerations

My research complied with ethical principles as explained in Chapter 4 (*cf.* 4.5). I adhered to ethical issues in the research problem, purpose and question, data collection, data analysis and interpretation and in writing and disseminating the research.

1.7 CONTRIBUTION OF THE STUDY

1.7.1 Contribution to subject field

The study aims to assist Grade 4 educators to deal effectively with diverse learning style needs in inclusive Life Orientation classrooms by supplying examples to educators of how a variety of teaching methods and strategies, learning activities and assessment procedures can be selected to achieve Learning Outcomes in Life Orientation Grade 4.

1.8 CHAPTER DIVISION

The research is reported according to the following chapters:

CHAPTER 1: Introduction and statement of the problem

CHAPTER 2: Teaching in inclusive classrooms

CHAPTER 3: Diverse learning style needs in inclusive Life Orientation classrooms

CHAPTER 4: Empirical research design

CHAPTER 5: Data analysis and interpretation

CHAPTER 6: A teaching and learning programme to accommodate diverse learning style diversity in an inclusive Grade 4 Life Orientation classroom setting

CHAPTER 7: Summary, findings and recommendations

1.9 CHAPTER SUMMARY

In this chapter, the orientation and statement of the problem were defined and briefly discussed, namely: how do educators understand diverse learning styles during teaching in inclusive Life Orientation classrooms and how do they accommodate diverse learning styles? (*cf.* 1.1, 1.2) Framed within an interpretivistic research paradigm (*cf*. 1.6.2.1), a qualitative phenomenological study (*cf.* 1.6.2.2; 1.6.2.3), by means of focus group interviews and

observations (*cf.* 1.6.2.5) was conducted. The aim of the study was to gauge the understanding of Grade 4 Life Orientation educators in the Sedibeng West District (*cf.* 1.5) regarding learning style diversity, and to explore how they accommodate various learning styles during teaching, learning and assessment.

The next chapter engages in an exploration of what teaching in inclusive classrooms entails.

CHAPTER 2

INCLUSIVE EDUCATION AND CLASSROOM PRACTICE

2.1 INTRODUCTION

In this chapter, inclusive education is explored in detail, by referring to its historical background and development both internationally and nationally, as well as the challenges that educators experience in teaching learners in inclusive classrooms.

The chapter explores the following topics:

- Inclusive education: a concept clarification
- The development of inclusive education
- The inclusive school
- Challenges faced by educators in inclusive classrooms
- Pedagogical barriers to learning

Although the focus of the study is not on inclusive education as such, its development and implications for classroom practice need to be explored first in order to understand why it is important that educators address learning style diversity during teaching.

2.2 INCLUSIVE EDUCATION: A CONCEPT CLARIFICATION

Inclusion emphasizes diversity over assimilation, and is based on the notion of human rights, equity, equality, social justice, respect, tolerance and care (SA, 2001:16-19; Swart & Pettipher, 2005:4; Dunbar-Krige & Van der Merwe, 2010:163, 170). Inclusion is the movement that seeks to create schools based on meeting the needs of all learners as well as respecting and learning from one another (McGregor & Vogelsberg 1998:33; Salend, 1999:114). Inclusion recognizes and respects the differences among all learners, capitalizing on the similarities. It is about supporting all learners, educators and the education system as a whole so that the full range of learning needs

can be satisfied (SA, 1996a:21; Rakholile, 2006:11). Inclusive education replaced the earlier ethic of individualism, competition and the *"winner-takes-all"* approach (Mittler, 2000:10). Inclusive education, according to the South African Department of Education (SA, 2001:6), is the acknowledgement that all children and youth can learn and they all need support. It is enabling education structures, systems and learning methodologies to meet the needs of all learners, acknowledging and respecting differences in learners, whether due to age, gender or ethnicity, language, class, disability, HIV or other infectious diseases. Inclusive education is further defined as broader than formal schooling, acknowledging that learning also occurs in the home and community, and within formal and informal settings and structures. Inclusive education is about changing attitudes, behaviour, teaching methods, curricula and environment to meet the needs of all learners, as well as maximizing the participation of all learners in the culture and the curriculum of educational institutions, and uncovering and minimizing barriers to learning (SA, 2001:16).

Inclusive education systems must recognize and respond to the diverse needs of their learners, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricular, organizational arrangements, teaching strategies and resources used in partnerships with their communities (UNESCO, 1994:11-12). This description is grounded on the following educational and economic grounds:

- The education of all learners requires developing teaching practices that accommodate individual differences and therefore benefit all learners.
- Inclusive education fosters social inclusion, thereby valuing and embracing differences and nurturing attitudes of acceptance and respect. This informs the basis for a just and non-discriminatory society.
- Educating all learners together is a more cost-effective way of delivering education for all learners.

Based on the aforementioned description, inclusion and inclusive education can additionally be described as a conceptualization of values and beliefs that

welcomes and celebrates diversity, and is not only a set of practices (Udvari-Solner & Kluth, 2008:15; Dunbar-Krige & Van der Merwe, 2010:162).

In summary, the concept inclusion signals to me an optimistic viewpoint that refers to the acknowledgement of diversity in learners and supporting them to satisfy all their different needs, in an environment that utilizes accommodative teaching methods and flexible curricula to make quality education possible for all.

Inclusive education can also be linked to concepts such as mainstreaming, integration and normalization.

Mainstreaming is about getting learners to fit into a particular kind of system or to integrate them into an existing system. It is about giving more support to some learners so that they can fit or be integrated into the normal classroom routine (Zinkil & Gilbert, 2000:45; SA, 2001:17). The goal of mainstreaming is to return learners with barriers to learning to the mainstream of education as much as possible, alongside normally developing peers (Swart & Pettipher, 2005:7).

Integration implies the placement of a learner who experiences barriers to learning either in a special class in a typical school, or in a mainstream classroom where the learner could participate in some activities with peers who do not experience barriers to learning (Engelbrecht, Green, Naicker & Engelbrecht, 1999:66; Kisanji, 1999:35; Swart & Pettipher, 2005:7).

Normalization is defined as making available to all who experience barriers to learning, patterns of life and conditions of everyday living, which are as close as possible to the regular circumstances and ways of life of society (Du Toit, 1996:7; Swart & Pettipher, 2005:6).

The idea of normalization came to the fore in the late 1960's in Western societies. According to Swart and Pettipher (2005:6), normalization originated in Scandanavia before it was popular in the United States. Du Toit (2001:13) defines normalization as *"making available to all handicapped people patterns of life and conditions of everyday living which were as close as possible to the*

regular circumstances and ways of life of society". This means that people with *"handicaps"* have the right to a *"normal"* daily routine, which involves *"normal"* school and home circumstances, respect from others, and *"normal*" economic and environmental standards (Swart & Pettipher, 2005:6).

Inclusive education thus moves away from special education, which is a form of education provided for those who are not achieving or are unlikely to achieve through regular educational provision (UNESCO, 1994:13; Dunbar-Krige & Van der Merwe, 2010:64-166).

My conceptualization of inclusive education in the context of the study will be as follows:

Inclusive education promotes one education system that supports all learners despite their diverse learning needs to participate in activities designed for all learners, ensuring quality education for all through appropriate curricula, methods of teaching and resources. The primary role of the educator is to facilitate learning by delivering and differentiating the curriculum so that it is accessible to all learners

In the following section, I accommodate the development of inclusive education, with the aim to focus the attention to important changes regarding educators' classroom practice.

2.3 THE DEVELOPMENT OF INCLUSIVE EDUCATION

Inclusive education has become extremely popular both internationally and nationally. The following sections briefly highlight the development of inclusive education internationally and nationally, in order to focus on the changes regarding classroom teaching, learning and assessment that are advocated by an inclusive approach.

2.3.1 The historical development of inclusive education

The inclusive education approach received its first major input at the World Conference on the Special Needs Education 1994 in Salamanca, Spain. The purpose of the Salamanca Conference was to further the objectives of

education as a fundamental human right by paying attention to the fundamental policy shift necessary for the development of inclusive education. Policy shifts needed to be aimed at enabling schools to serve all learners, including those experiencing barriers to learning. Furthermore, acknowledgement was given to processes such as education systems that recognize and respond effectively to diversity. The emphasis was therefore on developing an inclusive education system that, according to UNESCO (1994:6), will accommodate all learners, regardless of their physical, intellectual, social, emotional, linguistic or other conditions.

According to Lipsky and Gartner (1997:258), the Salamanca Statement provides a vision, creates a standard and produces a benchmark for measuring progress at schools. Fundamental school renewal and restructuring is therefore essential for implementing inclusion (Lipsky & Gartner, 1997: 257).

Internationally, inclusion exists because of the broad principles such as dedication to building a more democratic society, a more equitable and quality education system and the belief that extends the responsibility of regular schools to accommodate the diverse learning needs of all learners (Dyson, 2001:27; Swart & Pettipher, 2005:3, 4). According to Mittler (2000:10), inclusion is broadly about developing inclusive community and education systems. Values that are celebrated by inclusive education are diversity, gender, nationality, race, language, socio-economic background, cultural origin and levels of education achievement or disability (Thomas & Loxley, 2001:118).

2.3.2 International development arena

Internationally, inclusion is understood as an expression of the struggle to achieve universal human rights, which originated in the international human rights movement (Pijl, Meijer, & Hegarty 1997:77; Mittler 2000:12). Schools are influenced by economic, political and social developments. The developments and changes in society are reflected in what happens in schools. Schools and education are rapidly becoming outdated because of

change in education, society and in politics. Societies are becoming more diverse and multicultural, resulting in classrooms consisting of learners from diverse ethnic, linguistic, cultural and socio-economic backgrounds and with diverse abilities (Frederickson & Cline 2002:4), which requires an approach to teaching that will accommodate the aforementioned diversity.

According to Florian, Rose and Tilstone (1998:13), inclusion signals a paradigm shift from specialness of learners and the special forms of provision they were seen to need, towards the removal of obstacles within society and the participation of all people, especially those with differences, in the everyday life of society.

2.3.3 The South African development arena

There have been major shifts both internationally and nationally regarding the patterns and trends of disability that have influenced the movement towards inclusive education in South Africa. The shifts moved from a medical discourse to a social rights discourse (Dunbar-Krige & Van der Merwe, 2010:164), and are explored in the sections that follow.

2.3.3.1 Medical discourse

According to Green (2001:12), medical discourse regards disability or handicap to be abnormal and a condition that is not remediable. In this discourse, an impaired person is perceived as disabled, and is excluded from mainstream social and economic life (Naicker, 2001:13; Dunbar-Krige & Van der Merwe, 2010:164)

2.3.3.2 Charity discourse

The charity discourse views those with disabilities as in need of assistance and pity and being dependent on others (Dunbar-Krige & Van der Merwe, 2010:164). Naicker (in Mowes, 2002:31) mentions that people with disabilities are seen as underachievers and are in need of institutional care. It promotes the idea that non-disabled authorities always make decisions on behalf of disabled people.

Christian communities started establishing asylums as places of refuge for the disabled and rejected as early as after the birth of Christ (Du Toit, 1996:17). This practice continued through the Middle Ages and was accompanied by much ignorance and superstition (Du Toit, 1996:17). These charitable initiatives promoted education for learners with disabilities and were responsible for the establishment of a strictly limited range of separate special schools for learners with disabilities (Dyson & Forlin, 1999:24-42). These learners were excluded, isolated, discriminated against, stereotyped and even hated (Dunbar-Krige & Van der Merwe, 2010:164). By the middle of the twentieth century, countries that were mostly industrialized had a separate special education system that provided for learners with special educational needs.

2.3.3.3 Lay discourse

This discourse has to do with the isolation of people who deviate from the normal physical appearances, and relates to hate, prejudice, ignorance and fear (Naicker, 2001:14). This discourse in not only belittling, casting people with disabilities in the role of deficit-laden dependants on the rest of society, but it can also be used to legitimize the maintenance of social arrangements which in time and systematically marginalize and disadvantage such people (Dyson & Forlin, 1999:24-42).

I support the view of Green (2001:11), who argues that medical, charity and lay discourses all imply that the existence of special educational needs requires and justifies exclusion from the mainstream of education and social and economic life.

2.3.3.4 Social rights discourse

Social and ecological theoretical discourse arose due to the criticism of the medical discourse. There was a need of moving from the medical discourse of specialness towards the removal of obstacles within society and the participation of all people, especially those with differences, in the everyday life of society (Florian, Rose & Tilstone, 1998:1-9; Dunbar-Krige & Van der Merwe, 2010:164). The social rights discourse emphasizes equal opportunity,

self-reliance, independence and wants rather than needs. It is committed to extending full citizenship to all people (Naicker, 2001:14; Mowes, 2002:34). Mowes (2002:35) further mentions that UNESCO, UNICEF and the World Bank came to a joint agreement that all learners have the right to be educated together, regardless of their physical, intellectual, emotional, social, linguistic or other conditions.

In support of the social rights discourse, White Paper 6: Building an Inclusive Education and Training System, stipulates the following six principles that form the basis of the emerging policy on the development of an inclusive education and training in South Africa (SA, 2001:47).

- Creating education and training policies, legislation, advisory bodies and governance and organizational arrangements that emphasize capacity building at leadership and management levels and the fostering of inter-sectorial collaboration at all levels.
- Strengthening education support services, with a focus on the development of district support teams, institution-level support teams and a new role for special schools as part of the district support team.
- Expanding provision of and access to education, initially through the development of selected inclusive institutions within the context of district development.
- Assuring curriculum, assessment and quality assurance, with a focus on the development of a flexible curriculum, curriculum support, institutional development, appropriate assessment, development of materials and assistive devices to accommodate the diverse learning needs of the learner population and quality assurance that track and promote this.
- Creating information advocacy and mobilization programmes to facilitate a shift in thinking about special needs and support in the country towards an understanding of and support for the development of an inclusive education and training system.

- Providing appropriate and adequate funding support, which focuses on accommodating particular educational needs, with the most vulnerable learners and institutions being a priority in the short and medium terms

Linked to White Paper 6, the Constitution of South Africa (SA, 1996b) stipulates that each child has the right, among other things, to basic education. Furthermore, Section 28(2) of the Constitution points out that children's best interest should be seen as of importance in all matters that affect them (De Waal & Grosser, 2009:698). It is therefore clear that educators need to acknowledge and accommodate the rights of learners during teaching and learning inclusive classrooms. In this regard, the Norms and Standards for Educators as found in the National Education Policy Act 27 of 1996 (SA, 1996a:47) *inter alia* highlights the following important roles that educators should play: educators should mediate leaning sensitive to the needs of learners and should use appropriate approaches to teaching and learning.

In support of the argument of De Waal and Grosser (2009:698), I conclude that if educators uphold the aforementioned legislative directives, the pedagogical and intellectual needs of learners will be cared for.

According to Lazarus, Daniels and Engelbrecht (2001:45-68), inclusive education shifts the focus from the learners having to adjust to "fit into" the systems, to schools transforming themselves to be capable of accommodating the diverse needs of all learners so that each individual learner receives a learning experience that "fits". Such transformation efforts are not possible without a radical shift from one set of assumptions, beliefs, values, norms, relationships, behaviours and practices to another, based on values of mutual acceptance, respect for diversity, a sense of belonging and social justice (*cf*. 3.9). These moral requirements need to culminate in:

- an expression of commitment to nurturing a genuine respect for all people;
- combating prejudice and discriminatory practices;
- utilizing human resources to the mutual benefit of all;

- acknowledging the rights of all learners to access equitable educational opportunities; and
- developing a flexible curriculum that accommodates the diverse needs of all learners (Lazarus *et al.,* 2001:45-68).

The Department of Education (SA, 2001:16), Lomofsky and Lazarus (2001:312) maintain that inclusive education and training refers to the following:

- acknowledging that all children and youths can learn and that all children and youths need support;
- accepting and respecting the fact that all learners are different in some way and have different learning needs which are valued equally and are an ordinary part of our human experience;
- enabling education structures, systems and learning methodologies to meet the needs of all learners;
- acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class and disability or HIV status;
- acknowledging that learning also occurs in the home and the community, and within formal and informal modes and structures;
- changing attitudes, behaviour, teaching methodologies, curricula and the environment to meet the needs of all learners;
- maximizing the participation of all learners in the culture and the curricula of educational institutions, and uncovering and minimizing barriers to learning; and
- empowering learners by developing their individual strengths and enabling them to participate critically in the process of learning.

It is specifically with regard to accommodating diverse learning style needs that this research wishes to contribute.

In the following section, the characteristics of an inclusive school are explored, with specific focus on the way teaching and learning should unfold.

2.4 THE INCLUSIVE SCHOOL

According to Donald, Lazarus and Lolwana (2002:34), the goal and the purpose of an inclusive school is to contribute towards the development of an inclusive society, where all members of society are able to fulfil their potential and participate optimally, and where respect for and valuing of diversity in the context of social integration is an active value. Having respect for diversity in the learner population means:

- developing a genuine respect for all people;
- combating prejudice and discriminatory practices against groups who have been discriminated against most;
- drawing on different strengths of the human resources available in the teaching and learning context to the mutual benefit of all;
- acknowledging and supporting the rights of all learners and others to full participation in the learning and teaching process; and
- developing a flexible curriculum that meets the diverse needs of the learner population.

The writers emphasize the fact that the principle of social integration in a school context *inter alia* implies: the facilitation of opportunities for learners and other members of the learning community to learn and work together in a cooperative environment. Furthermore, it refers to accommodating prejudices wherever necessary; to view differences as a rich resource to benefit all; and to nurture respect for oneself and others (Donald *et al.*, 2002:34).

2.4.1 The inclusive Life Orientation classroom in an inclusive school

According to the Department of Education (SA, 1997:38), Mowes (2002:42) and Du Plessis (2007:35), all successful inclusive schools and therefore all classrooms, irrespective of the subject or Learning Area should adhere to the following principles during teaching and learning:

A sense of community

Inclusive schools and classrooms do not focus on how to help any particular category of learners, such as those classified as disabled, to fit into the mainstream. Instead, the focus is on how to operate classrooms and schools as supportive communities that include and meet the needs of everyone. The educators and staff at such schools foster a sense that everyone belongs (Du Plessis, 2007:35).

Diversity is valued

For Moŵes (2002:42), diversity is believed to strengthen the school and classroom while offering all its members greater opportunities for learning.

Natural proportion

Inclusive schools and classrooms have a normal or natural proportion of learners with disabilities. They avoid serving as centres, clusters or sites for any category of learners (Moŵes, 2002:42).

Service based on need rather than on labels

Learners are viewed and approached as individuals, rather than as members of categorical groups. This makes it much more likely that educators will focus on the specific needs, interests and capabilities of the learners (Du Plessis, 2007:35).

Support provided in general educational classrooms

An inclusive school and classroom delivers specialized services and supports learners who experience barriers to learning. If a learner is experiencing difficulty or needs certain types of curricular or learning modification or special tools and techniques to succeed educationally or socially, the inclusive school should work out ways to get those services and support to the learners (SA, 1997:38).

Interdependence and support networks

Inclusive schools and classrooms tend to foster interdependence and support networks. There is an emphasis on peer tutoring, buddy systems, circles of friends and other ways of connecting learners together in natural, on-going and supportive relationships (Moŵes, 2002:42).

Curriculum adapted when needed

The curriculum is adapted, when necessary, to meet the needs of any learner for whom the standard curriculum is inappropriate or who could be better served through adaptation (Moŵes, 2002:42, Uys, 2005:405). The success of inclusion is seen in a situation where learners are working at their own flexible working pace (Lightfoot, Wright & Sloper, 1999:277).

Resources combined

Resources, which include staff, curriculum and teaching procedures from special and regular education settings, are combined to meet diverse needs in integrated classrooms so that no learner is left out (Moŵes, 2002:42, Swart & Pettipher, 2005:12).

2.4.2 Factors that influence the success of inclusion

For inclusion to succeed, schools have to take cognizance of the following factors.

Visionary Leadership

Principals at schools where learners are becoming more integrated into the school programme need to have a good working knowledge of special education policies and procedures (Swart & Pettipher, 2005:19).

Collaboration

According to Swart and Pettipher (2005:19) and Uys (2005:406), reports from school districts indicate that the achievement of inclusive education presumes that no one educator can or ought to be expected to have all the expertise

required to meet the educational needs of all learners in the classroom. Individual educators must have available to them the support systems that provide collaborative assistance and the possibility to engage in cooperative problem-solving (Uys, 2005:406 Swart & Pettipher, 2005:19).

Refocused use of assessment

Swart and Pettipher (2005:20) assert that traditionally, learner assessments have been used as screening devices to determine who gets into which slot. Inclusive education advocates a move towards more *"authentic assessment"* designs, including the use of portfolios of learners' work and performances, and generally working to refocus assessment (Swart & Pettipher, 2005:20).

Support for staff and learners

Systematic staff development and flexible planning time for special education and general education to meet and work together are two essential factors for successful inclusive education programmes (Swart & Pettipher, 2005:19). For the benefit of learners, support for inclusion often means supplementary aids and support services, including school aids; provision of therapy services integrated into the regular school programme; peer support; buddy systems; and effective use of computer-aided technology and other supportive devices (Swart & Pettipher, 2005:19). A classroom assistant, according to Hemmingson and Borell (2000:57-63), is one of the most important factors for successful inclusion, as well as availability and access to facilities and equipment that are appropriate to accommodate barriers to learning (Lightfoot *et al.,* 1999:268 ; Hemmingson & Borell, 2002:32).

Funding

Funding is an important means in supporting the move towards inclusion. Education costs money and where learners with special needs are concerned, it can cost a great deal. The present funding formulas often promote separation placements. Changes in funding, so that funds follow the learners, are important for successful inclusive education (Belknap, Roberts & Nyewe, 1999:169).

Effective parental involvement

Parents are important components to educational change, and inclusive schools encourage parental participation through family support services, (Alant & Harty, 2005:84; Vosloo, 2005:12). Lightfoot *et al*. (1999:268); Hemmingson and Borell (2000:59, 60); Mukherjee, Lightfoot and Sloper, (2001:23) agree that, where there is understanding and support from parents, educators and friends, inclusion is successful. The education of parents on inclusion contributes to the success of inclusion (Gilbride, 1998:1 -12; Vosloo, 2005:12).

Inclusive education is a human right, it is good education and it makes good social sense. The Centre for Studies in Inclusive Education (CSIE) (1997:34) has identified ten reasons for inclusion, which are clustered as human rights, good education and good social sense. Each of the aforementioned aspects are briefly explained in the sections below.

Human rights

- All children have the right to learn together.
- Children should never be devalued or discriminated against by being excluded or sent away because of their disability or learning difficulty.
- There are no legitimate reasons to separate children for their education. Children belong together, with advantages and benefits for everyone.

Good education

- Research shows learners do better academically and socially in inclusive settings.
- There is no teaching or care in a segregated school that cannot take place in an ordinary school.
- Given commitment and support, inclusive education implies a more efficient use of educational resources.

Good social sense

- Segregation teaches children to be fearful and ignorant, and breeds prejudice.
- All children need an education that will help them develop relationships and prepare them for life in society.
- Only inclusion has the potential to reduce fear and to build friendships, respect and understanding.

According to Scala (2001:4) and Kleinert, McGregor, Blandford, Jones, Owens, Harrison and Miracle (2004:28-34), inclusive education has a range of benefits for learners as summarised in Table 2.1.

Table 2.1: Benefits of inclusion

Role-players	Benefits
Children experiencing barriers to learning	• They can learn new skills through imitation. • They are with peers from whom they can learn new social and real life skills that will equip them to live in their communities. • They have an opportunity to develop friendship with typically developing children. • They get access to education in their communities instead of being sent away to special schools or staying at home. • They are more motivated to use specific strategies used by others. • They respond to the respect and positive feedback from peers and educators, and set goals of their own. • They become more assertive in problem-solving and are able to seek help from several adults and peers. • As learner attitudes and behaviours change, they spend more time on tasks and achieve greater academic and social success.
All the children	• They are able to learn more realistic and accurate views about children experiencing barriers to learning. • They can develop positive attitudes towards those different from them. • They can learn from others who achieved success despite challenges in their way. • Both slow and gifted learners can benefit from the inclusion of learners needing support to learn.

The table highlights an important aspect of inclusive education, namely that learners will not only be able to learn according to their preferences, but will also get the opportunity to learn according to strategies preferred by other learners. This is a very important teaching and learning principles, seen against the background of Kolb's (1984:199) experiential cycle of learning that argues for learners to be exposed to all the different modes of learning (sensory experienced, reflective observation abstract conceptualization and active experimentation), even if they are not preferred by the learner (*cf.* 3.3.13).

The implementation of inclusive education is also threatened by a number of challenges as explained below.

2.4.3 Challenges faced by educators in inclusive classrooms

According to Abel and Sewell (1999:288), Van Zyl and Pietersen (1999:75), Kyriacou (1998:77-102), Schrugss and Mastropieri 1998:17-48), Male and May (1997:133-140), Goliber, (2000:28), Kelly, (2000:47), Sands, Kozleski & French, (2000:43), Smart (2000:31), Swart *et al*. (2000:17), Hall (2002:34), Department of Education, (SA, 2001:6), Harris and Schubert, (2001:54), Hay, Smith and Paulsen (2001:214), Hepburn, (2001:66), Hunter and Williamson, (2001:87), Swart, Engelbrecht, Eloff and Pettipher (2002:175-189) and Akintola and Quinlan (2003:31), educators are faced with many challenges related to teaching in inclusive classrooms internationally and in South Africa. The authors point out the following as challenges:

- Inadequate knowledge, skills and training of educators to implement inclusive education effectively.
- Difficulties with learners (motivation and control of learners, poor learner attitudes, learner reluctance).
- Lack of educational and educator support.
- Inadequate provision of facilities, infrastructure and assistive devices.
- Potential effects of inclusive education on learners with special education needs, as well as on other learners in the mainstream.

- The methods and processes used in teaching.
- How learning is assessed.
- Lack of parental support.
- Time pressure: educators need more time to plan their teaching activities to include a diversity of learners.
- Poor ethos due to poor staff relations (conflict and ineffective communication).
- Poor working conditions (heavy work load, large overcrowded classes, additional administrative responsibilities, lack of support and encouragement, financial constraints).
- The content (what is taught).
- Educators need additional educator assistants who can support them in teaching a diversity of learners, as well as support from specialized people for advice and guidance.
- Insufficient teaching and learning materials.
- Poor working conditions (heavy workload, large classes, additional administrative responsibilities, lack of support and encouragement, financial constraints).

In summary, educators are faced with many challenges while teaching in inclusive classroom settings. As mentioned above, some of these challenges include having inadequate knowledge, skills and training to implement inclusive education effectively. In addition to the aforementioned, methods and processes used during teaching and how assessment should be done, also appear to be problematic. The mentioned challenges could point to the fact that the educators might not be able to accommodate diverse learning style needs in their classrooms.

If educators do not accommodate diverse learning style needs in their classrooms, pedagogical barriers can occur (Landsberg, 2005:61-77). The following section will briefly explore the nature of pedagogical barriers.

2.5 TEACHING IN INCLUSIVE CLASSROOMS TO AVOID PEDAGOGICAL BARRIERS TO LEARNING

Pedagogical barriers refer to interference with on-task behaviour, insecurity in unstructured or changed learning situations that impede performance, over cautiousness and distrust, which create careful, but slow learners, while impulsivity leads to fast, but careless learners (Swart & Pettipher, 2005:18 Rakholile, 2006:19). According to De Waal and Grosser (2009:698) pedagogical barriers relate, among other things, to needs that arise when educators do not link their teaching to the preferred learning style of a learner, thus creating a learning environment which is not pedagogically safe and secure.

Muthukrishna and Schoeman (2000:315-335) outline the following strategies for accommodating pedagogical barriers to learning and development during teaching and learning:

Development of a flexible curriculum

The education system must provide a flexible curriculum responsive to differences in the learner population and one that ensures that all learners can participate effectively in the learning process. It is suggested that the content of learning programmes should be relevant to life and work, and should affirm the history and culture of learners (Muthukrishna and Schoeman (2000:315-335). Teaching approaches and learning materials should accommodate the diverse needs of the learner population to ensure maximum participation Assessment of learning and teaching should occur continuously. The primary aim of assessment would be to monitor whether Learning Outcomes are attained, and to evaluate the capacity of the system to support and facilitate the learning process.

Promotion of the rights and responsibilities of parents

Partnerships with parents should be promoted. According to Muthukrishna and Schoeman (2000:315), the strategy refers to recognizing the critical role that can be played by parents in the planning, development and monitoring of

education programmes and support, as well as during assessment processes, and in school governance.

Infusing support services

The strategy points to moving away from supporting individual learners to supporting the system in order to be responsive to diversity (Muthukrishna & Schoeman, 2000:315).

A holistic approach to institutional development

Holistic institutional development implies the facilitation of a positive culture of learning and teaching, strategic planning and evaluation, organizational leadership, management and staff development (Muthukrishna & Schoeman, 2000:316).

Development programmes for educators and other human resources

Muthukrishna and Schoeman (2000:316) argue that emphasis should be placed on effective development programmes for educators and other human resources. Programmes should aim at providing competencies in accommodating barriers to learning and development, and making centres of learning responsive to the diverse needs of the learner population. For example, programmes aimed at education management would include issues relating to whole school development to accommodate barriers to learning and development.

Based on the aforementioned facts, I argue that the development of a flexible curriculum is a prerequisite for accommodating diverse learning styles. This implies structuring teaching and learning in such a way that all learners benefit from the teaching and learning experience.

2.6 CHAPTER SUMMARY

This chapter provided an overview of the concept inclusion (*cf.* 2.2), as well as of the development of inclusive education both internationally and nationally (*cf.* 2.3). Inclusion involves *inter alia* a teaching approach, which

accommodates diverse learners and their diverse needs in one classroom. This school fosters the integration and accommodation of all learners within, including supporting them and accommodating their diverse needs. If the diverse needs of learners in terms of their preferences for learning in a particular way are not accommodated, pedagogical barriers (*cf.* 2.5) are created which could lead to ineffective learning, learners being excluded from the learning system and learning potential not being unleashed.

The next chapter explores the diverse learning style needs of learners, as well as the teaching methods and strategies, learning activities and assessment approaches to be utilized in order to accommodate diverse learning style needs in inclusive Life Orientation classrooms.

CHAPTER 3

DIVERSE LEARNING STYLE NEEDS IN INCLUSIVE CLASSROOMS

3.1 INTRODUCTION

The previous chapter dealt with inclusion and inclusive education, its development both internationally and nationally in South Africa. Pedagogical barriers and challenges that could emanate if educators do not accommodate learning style diversity during teaching, learning and assessment in their classrooms were also explored. In this chapter, the diverse learning style needs, teaching methods and strategies, as well as learning activities and assessment approaches to accommodate learning style diversity in Life Orientation are explored.

The chapter layout is as follows:

- Learning style needs
- Learning style models
- The importance of accommodating learning style needs
- Determining the learning style needs of learners
- Teaching methods and strategies to accommodate learning style needs
- Learning activities to accommodate learning style needs
- Assessment approaches to accommodate learning style needs
- Accommodating learning style needs in Life Orientation

3.2 LEARNING STYLE NEEDS

In order to understand learning style needs and preferences, a brief description of how the brain works, introduces the topic. The explanation below highlights the fact that learning style needs and the working of the brain are intertwined.

The brain consists of three systems with their distinct functions (Nieman & Pienaar, 2006:82). The **reptilian brain** is the part of the brain that controls functions to survive, namely skills to fight back or run away in difficult or stressful situations. The **limbic system** controls emotions and feelings of self-awareness. Finally, the **neocortex** accommodates higher cognitive functions like processing information, understanding, analysis, synthesis and evaluation. This part of the brain is used to make decisions, plan, argue and discuss (Nieman & Pienaar, 2006:83).

According to Nieman and Pienaar (2006:84), all three of the aforementioned systems are involved during teaching and learning. Learners must acquire survival skills (reptilian brain), learn values and norms (limbic system) and use higher order cognitive skills (neocortex). The neocortex consists of two halves, the left and right brain. The left-brain is responsible for rational thinking, the origin of ideas, as well as logical, analytical and critical thinking. Left-brain thinkers are analytical, enjoy working with information, rely on language when thinking and recalling of information. They enjoy paying attention to detail and work systematically. Their preference is for auditory and visual learning in terms of symbols (Nieman & Pienaar, 2006:84). Right-brain thinkers accept information uncritically; rely on intuition and a broad flow of information. They can generalise and think holistically and are either impulsive or reflective thinkers who prefer to think in terms of sensory images (Nieman & Pienaar, 2006:84). It is evident from preceding discussion that left- or right-brain dominance implies certain learning preferences or styles in which people learn.

Learning styles refer to orientations towards approaching learning tasks and processing information in different ways (Grosser & De Waal, 2006:79). Lovelace (2005:176) asserts that learning styles are the way that learners begin to concentrate on, process, internalize, and remember new and difficult academic information. Furthermore, a learning style is composed of biological and developmental characteristics that make teaching environments, methods and resources effective for some learners and ineffective for others (Smith, 2002:64; Cuthbert, 2005:235-249; Lovelace, 2005:176). Lovelace (2005:177)

mentions that many learners can learn things that are easy for them without using learning styles, but all learners can learn new and difficult information better when they capitalize on their learning styles

According to Kruger and Adams (2002:211), Skogsberg and Clump (2003:177); Grosser and De Waal (2006:19) and Visser, McChlery and Vreken (2006:98), human beings are not the same; they are unique, individual and different. In the teaching and learning situation, learners are also individual, unique and different from one another and because of this, they learn differently, according to their different learning styles.

In summary, I conclude that learning styles refer to preferred ways in which learners acquire, manipulate and remember information. The preferred ways of learning are linked to left-brain or right-brain dominances. A number of these preferences are explored in section 3.3.

Literature highlights a number of models that describe the diverse learning style needs that educators may come across in classrooms. Various learning style models are elucidated in the following sections.

3.3 LEARNING STYLE MODELS

In the following sub-sections, various learning style models that link learning preferences to a number of different factors are clarified.

3.3.1 The learning style model of Kolb

Kolb (1984:199) and Little (2004:8) classify learning styles as experience, observation, conceptualization and action. Four major categories of learners that can be found in teaching and learning situations are described as follows by Kolb (1984:199):

Convergers (Sensors and Feelers) prefer to learn from specific sensory experiences. **Divergers** (Watchers) prefer to learn through perception and observation rather than taking action. They rely on their own thoughts and feelings to form opinions. They learn best by viewing concrete situations from many different points of view, and therefore enjoy brainstorming sessions.

Assimilators (Thinkers) are best at understanding a wide range of information and putting it into a concise and logical form. They are less focused on people and more interested in abstract ideas and concepts. Assimilators act on an intellectual understanding of a situation. Logical soundness is more important to them than practical value. **Accommodators** (Doers) prefer to learn from hands-on experience and enjoy carrying out plans and involving themselves in new and challenging experiences.

3.3.2 The learning style model of Dunn and Dunn

Dunn and Dunn's learning style model (in Burke & Dunn, 2003:103-106; in Lovelace, 2005:117), indicates five basic stimuli that affect an individual's ability to master new and difficult academic information and skills.

The first stimulus strand is about **biologically imposed environmental elements** that prefer sound to quietness, low to bright light, warm to cool temperatures and formal to informal settings (Dunn & Dunn in Burke & Dunn, 2003:103-106). The second stimulus strand includes **emotional elements** such as needing breaks while concentrating. Other elements include high or low academic motivation, responsibility and an internal rather than an external need for structure (Dunn & Dunn in Burke & Dunn, 2003:103-106).

Sociological elements, as a third stimulus, include preferences with regard to working alone, in pairs, with pairs, as part of a team or with an adult who is either authoritative or collegial (Dunn & Dunn in Burke & Dunn, 2003:103-106).

The **physiological characteristics** compose the fourth stimulus strand. Perceptual preferences may be the most important aspect of learning style. These preferences consist of auditory, visual, tactual (handling or manipulating instructional resources) and kinaesthetic (actively participating in learning while standing or moving) elements. These preferences correspond well with the learning style model of Kolb (1984:199), according to which four types of learners can be identified, namely Sensors/Feelers, Watchers, Thinkers and Doers.

The fifth stimulus strand composes **global versus analytic processing style differences** (Dunn & Dunn in Burke & Dunn, 2003:103-106).

No person is affected by all learning style elements. Each preference that is revealed is likely to increase the ease with which that person concentrates and his/her enjoyment of doing so. The fact that individuals have different combinations of learning-style preferences can explain why there is no single teaching method that is effective for all learners (Dunn & Giggs, 2000:29). Dunn and Giggs (2000:19) mention that once learning styles have been identified, educators can estimate the approaches, methods and sequences that are likely to make learning relatively comfortable for each learner.

3.3.3 The Myers Briggs Type of Indicator Model of Learning Styles

The Myers Briggs Type Indicator Model of learning styles classifies learners according to psychological types (Lawrence, 1994:89), indicating that learners may be:

Extraverts who try things out and focus on the outer world of people, or **Introverts** who think things out by focusing on the inner world of ideas. Learners may be **Sensors** who are practical, detailed, focus on facts and procedures or **Intuitors** who are imaginative and concept-orientated, and focus on meanings and possibilities.

Learners who are classified as **Thinkers** are sceptical, make decisions based on logic and rules, or **Feelers** who are appreciative, making decisions based on personal and humanistic considerations; **Judgers** who set and allow agendas, seeking closure even with incomplete data or **Perceivers** who adapt to changing circumstances and achieve closure by obtaining sufficient detail.

3.3.4 The Hermann Brain Dominance Instrument Classification

The Hermann Brain Dominance Instrument (HBDC) (Hermann, 1990:66) classifies learners in terms of their relative preferences for thinking in four different modes that are based on the task-specialized functioning in the brain (*cf*. Nieman & Pienaar, 2006:84) (*cf.* 3.2):

- Quadrant A (upper left-brain): These learners think logically, analytically and quantitatively. They also prefer precise, to the point information.
- Quadrant B (lower left-brain): These learners are sequential, organized, do thorough planning and structure their work. They do very well in an organized and consistent approach to classroom teaching with clear instructions and expectations.

  Quadrant A and Quadrant B learners could be compared to the Assimilators (Thinkers) in the learning style model of Kolb (*cf*. 3.3.1).
- Quadrant C (lower right-brain): These learners tend to be emotional, interpersonal, sensory and kinaesthetic. They prefer group discussion, sharing and expressing ideas and hands-on learning.
- Quadrant D (upper right-brain): Learners in this quadrant tend to be visual, holistic and innovative. These types of learners prefer discovery and exploration during learning and opportunities to experiment (Maree & Fraser, 2004:136-137).

  Quadrant C and Quadrant D learners could be compared to the Convergers (Sensors/Feelers) in the learning style model of Kolb (*cf.* 3.3.1).

  Strong links between the Hermann Brain Dominance Instrument (Hermann, 1990:66) and the models of Kolb (1984:199) (*cf*. 3.3.1), Schurr (1994:45) (*cf.* 3.3.7) and Leider (1997:35) (*cf.* 3.3.6) in terms of having perceptual preferences during learning, are noted.

3.3.5 The Felder-Silverman Learning Style Model

The Felder-Silverman Learning Style Model (Felder, 1996:20, Felder & Silverman, 1988: 678) classifies learners as follows:

- Sequential learners prefer linear and orderly structured learning in small incremental steps.
- Global learners tend to be holistic system thinkers who learn in large leaps.
- Active learners learn by trying things and working with others.

- Reflective learners learn by thinking things through and working alone.
- Sensing learners are concrete, practical and oriented towards facts and procedure.
- Intuitive learners are conceptual, innovative and oriented towards theories and meanings.
- Visual learners prefer visual representations of presented material, as opposed to verbal learners who prefer written and spoken explanations.
- Inductive learners prefer presentations that go from the general to the specific.

3.3.6 The learning style model of Leider

Leider (1997:35) developed the ideas of Kolb further by describing the four types of learners as follows:

Sensors and Feelers (Convergers) who prefer to learn by intuition and by being sensitive to feelings and atmosphere. They like to see and hear in order to learn. They learn from games, role-plays or other actions. They rely on experience and intuition and are sensitive to feelings as well as events.

Watchers (Divergers) who like to learn through perception and observation. They like lectures, demonstrations, and similar activities where they observe.

Thinkers (Assimilators) are learners who like to analyse logically and create understanding for themselves. They like to read theory and study well by themselves.

Doers (Accommodators) prefer to learn by trying things out and they are willing to take risks. They prefer practice to theory and enjoy learning activities that allow them to do something, such as projects, tasks and discussions.

3.3.7 The learning style model of Schurr

The learning style mode of Schurr (1994:45), corresponds well with the model of Kolb (*cf.* 3.3.1) and Leider (*cf.* 3.3.6). Learners can be grouped according to the following preferences:

Auditory learners prefer voice-based learning through talking, reading aloud, singing and humming, listening and other sound-involved activities. **Visual learners** prefer sight-based learning, writing, drawing, neatness, demonstrations and other visual stimuli. **Kinaesthetic learners** enjoy movement-based activities. They use gestures and like to touch things and like sport and acting out dramas.

3.3.8 The learning style model of Rosenberg

Rosenberg (2001:47) classifies learners as follows:

Rigid inhibited learners need precise directions and rules and learn best by authority**. Acceptance anxious** learners are worried about pleasing others. They need warm, accepting educators. Educators should emphasize the importance of self-evaluation over evaluation of others. It is important for this learner to feel free to make mistakes. **Undisciplined learners** need structure and they need to know what is expected of them. They learn best by authority. **Creative learners** are confident, divergent Thinkers who enjoy competition and solving problems on their own and they learn best by exploring.

3.3.9 The learning style model of Armstrong

Armstrong (2000:323) groups learners according to the following learning styles/multiple intelligences as identified by Gardner (in Nieman & Pienaar, 2006:86).

- Verbal/linguistic learners think in words, like reading, writing, listening, and speaking, do well with books, dialogues, debates, brainstorming and storytelling.
- Logical/mathematical learners like reasoning, to organise and interpret data, calculate and quantify. They are socratic enquirers and do well at maths and science with problem-solving.
- Spatial learners think in images, graphics, jigsaw puzzles and mind maps. They like drawing and observing and rely much on their ability to visualise when performing tasks and do well at mind-mapping, puzzles, graphics.

- Musical/rhythmic learners think rhythmically, according to pitch or melody and in tunes. They like music and dances, disco, often tap and hum.
- Body/kinaesthetic learners think through sensations, likes sport, drama, movement, physical activity. They appreciate opportunities to touch and move, because they process their knowledge by means of physical sensations.
- Interpersonal learners like co-operative and group activities, board games and simulations. They are good at interactive, people-centred activities.
- Intrapersonal learners think best alone, like individual, self-paced and self-managed activities. They are reflective and quiet.
- Naturalistic learners notice the patterns in the environment and enjoy nature activities.

3.3.10 The learning style model of Honey and Mumford

Honey and Mumford (1992:89) developed the Honey and Mumford learning style model, which identifies the following four basic learning styles:

Activists who involve themselves in new experiences without thinking much of the consequences of their actions, brainstorm to tackle problems and move from one task to the next as the excitement fades. These learners prefer to be involved with other learners, bouncing ideas off them and solving problems as part of a team.

Reflectors are learners who are thoughtful; consider all possible options before making any decisions and whose actions are based on observation and reflection. These learners allow themselves to think before acting, to assimilate before commenting, thus taking time to prepare.

Theorists integrate their observations, principles, theories and models based on analysis and objectivity. They are keen on the basic assumptions, principles, theories, models and systems thinking. They enjoy rational thinking and logic, thus learning activities that are offered as part of a system, model, concept or theory.

Pragmatists are practical learners who prefer to apply new ideas immediately, and get impatient with an overemphasis on reflection (Van Rensburg, 2002:69-70).

The aforementioned learning style model corresponds well with the learning style models of Kolb (1984:199) (*cf.* 3.3.1), Felder-Silverman (Felder, 1996:20) (*cf.* 3.3.5), Leider (1997:35) (*cf*. 3.3.6) and Schurr (1994:45) (*cf*. 3.3.7). According to all of these models, learning style preferences appear to be linked to perceptual preferences that involve sensory learning, observation, abstract thinking and logic reasoning, and active, hands-on involvement.

3.3.11 The Gregorc learning style theory

According to Gregorc (1984:52), individuals learn in dualities, through four channels, namely the concrete sequential channel, the abstract sequential channel, the abstract random channel and the concrete random channel. These learning channels are called learning styles.

The **concrete sequential learning style** is characterized by thinking processes that are instinctive, methodological, practical, structured, and deliberate. These learners prefer a quiet, ordered and stable environment.

Learners who think in the **concrete random learning style** think quickly and are impulsive. They are curious, independent and creative. They prefer a stimuli-rich environment and function well in a new and chaotic environment (Van Rensburg, 2002:72).

Abstract sequential learners are intellectual, logical and rational. They prefer abstract ideas and pictures, work well in a quiet environment and cannot tolerate distraction (Van Rensburg, 2002:72).

The **abstract random learning style** is characterized by emotions and feelings. These learners are sensitive and flexible. They prefer a busy environment and involve feelings and ideas with diverse thinking (Van Rensburg, 2002:72).

3.3.12 The cognitive style model of Riding and Dauglas

According to Riding and Dauglas (1993:297), cognitive style refers to the learner's habitual or typical mode of thinking, perceiving, remembering and problem-solving. The writers identify the two following fundamental styles:

The **holistic-analyst cognitive style** processes information in a habitual way. In this style, there are two dimensions, namely the analytic learner who tends to process information into its component parts and the holistic-analyst who tends to retain a global view of a topic. Analytic learners prefer sequential organisational schemes, procedures and proper ways of doing things step-by-step and are critical and logical Thinkers. Holistic learners are intuitive Thinkers and likely to be more impulsive (Van Rensburg, 2002:77).

The **verbaliser-imager cognitive style** represents two different information modes. In the verbal dimension, learners tend to represent information in memory in words, and at the other end of the dimension, they represent information in memory in pictorial form. The imagers recall highly descriptive text better than the acoustically complex and unfamiliar text that verbalisers prefer (Van Rensburg, 2002:77).

3.3.13 Field-dependent and field-independent learners

According to Nieman and Pienaar (2006:85), field-dependent learners prefer a guided, global and holistic approach to learning as opposed to the field-independent learner who prefers an independent, analytical and systematic approach to learning.

A critical analysis and synthesis of all of the aforementioned learning style models clearly indicate that the way a learner learns relates to brain dominance (Nieman & Pienaar, 2006:84), as well as to a number of other factors as summarised below namely:

- physiological aspects related to perceptual preference during learning; (Kolb, 1984:199; Honey & Mumford, 1992:89; Schurr, 1994:45; Felder, 1996:20; Leider, 1997:120);
- personality aspects related to the learner (Lawrence, 1994:89);

- stimuli imposed by the environment which relate to a preference for sound versus quietness, lighting, temperature and formal versus informal environments (Burke & Dunn, 2003:103-106);
- emotional factors which affect motivation and concentration (Burke & Dunn in Lovelace, 2005:117);
- sociological factors which focus on social learning as opposed to individual learning (Burke & Dunn in Lovelace, 2005:117);
- styles to process information (Felder, 1996:20; Riding & Dauglas, 1993:297-307; Gregorc, 1984:52);
- level of dependency during teaching and learning (Nieman & Pienaar, 2006:85-86);
- task functioning in the brain (Hermann, 1990:66); and
- intelligence (Armstrong, 2000:321; Gardner quoted by Nieman & Pienaar, 2006:86).

In the context of the study, the focus was on the instructional practices of educators in inclusive Outcomes-Based classrooms, where teaching, learning and assessment are underpinned by Constructivism. Constructivism has a specific view regarding learning, namely that it should be **experiential** (Kramer, 2006:6). Kolb (1984:96) developed a model for experiential learning, which indicates that the learning process involves four stages that link directly with four learning styles, namely concrete experience (Convergers/ Sensors and Feelers), reflective observation (Divergers/Watchers), abstract conceptualization (Assimilators/Thinkers) and active experimentation (Accommodators/Doers). Based on the strong link between Outcomes-Based education, Constructivism and the learning style model of Kolb, I utilized the model of Kolb, to guide the conceptualization of learning style diversity. Furthermore, the experiential learning theory of Kolb (1984:199) served as theoretical framework for the design of the examples that were included in the teaching and learning programme in Chapter 6.

The strong links noted between the learning style model of Kolb (1984) (*cf*. (3.3.1), the Hermann Brain Dominance Instrument (Hermann, 1990:66) (*cf.* 3.3.4), Honey and Mumford (1992:89) (*cf.* 3.3.10), Schurr (1994:45) (*cf*. 3.3.7), the model of Felder-Silverman (Felder, 1996:20) (*cf.* 3.3.5), Leider (1997:35) (*cf*. 3.3.6), and the model of Gardner (in Armstrong, 2000:323) (*cf*. 3.3.9), guided my decision that perceptual preference could be a suitable way to conceptualize learning style diversity.

In order to justify a study that focuses on accommodating learning style needs during teaching, I had to unpack the importance of accommodating learning style needs as evidenced in the literature.

3.4 THE IMPORTANCE OF ADRESSING LEARNING STYLE NEEDS

According to Levinrad (2000:14), the importance of accommodating learning style needs is to ensure that all learners receive equitable and equal teaching that will unleash their learning potential. Larkin-Hein (2000:2) and Dasari (2006:27) emphasize that the accommodation of learning styles in the classroom improves learner interests and motivation to learn, primarily because it allows for alternative teaching strategies designed to accommodate/accommodate a diverse population of learners. I therefore argue that educators must set different tasks to accommodate learners with different learning capabilities so that they all experience success.

Kruger (1998:107) asserts that the accommodation of learning styles is critical because the practical application of learning style theory is that once educators know their learners' learning styles, they can use that information in teaching, supporting, counselling and facilitation. Learners can be assisted to learn individually. Van Rensburg (2002:136) states the following as the benefits of accommodating learning styles:

- an increase in the capacity of the individual to learn;
- increase in motivation to learn;
- learner frustration that is caused by being exposed to an inefficient learning process is avoided ;

- a realization that unwillingness to learn from one particular learning activity, cannot be generalized to an unwillingness to learn from another learning activity;
- a multiplier effect for educators in their teaching relationship with learners.

Felder (1996:18) indicates differences between learners in that some learners prefer to work with facts, while others favour working with theories. In addition to these learners, there are learners who prefer visual information above written and spoken information. If a educator exclusively teaches according to one preferred mode learners may not develop to reach their full potential for academic achievement, or learners might experience discomfort that interferes with their learning (Felder, 1996:18).

Gunter, Estes and Schwab (2003:3) claim that concern for learners should be the foundation of all teaching. Therefore, educators cannot teach learners in the same way, which is often believed to be an acceptable method to avoid bias and discrimination (Kruger & Adams, 2002:215). Felder (1996:18) argues that teaching should help learners to build skills in both the preferred and less-preferred styles of learning.

According to De Waal and Grosser (2009:699), an understanding of learning styles will help educators to understand and support learners throughout the learning process, aiming at promoting a sense of intellectual safety and security which could lead to better achievement.

According to my opinion, if educators do not accommodate diverse learning styles during teaching and learning, it could lead to labelling and stigmatising learners as poor performers, not motivated or being undisciplined purely because the teaching that they receive do not appeal to their preferred way of learning. In this regard, De Waal and Grosser (2009:699) refer to educators falling into the trap of stereotyping or favouring some learners to the expense of others.

If educators are to accommodate learning style needs, they have to be knowledgeable on how to determine the learning style needs of their learners

in order to plan for appropriate instruction. In the following section, one way of determining the learning style needs of learners is explored.

3.5 DETERMINING THE LEARNING STYLE NEEDS OF LEARNERS

Kolb (1984:68-69) developed a learning style inventory to assess individual orientation towards learning. The Learning Style Inventory measures a person's relative emphasis on each of the four modes of the learning process, which are concrete experience (Convergers, Sensors/Feelers) reflective observation (Divergers/Watchers), abstract conceptualization (Assimilators Thinkers) and active experimentation (Accommodators/Doers) (*cf*. 6.2).

Kolb (1984:68-68) combines two scores, the one that shows the extent to which a person emphasizes **abstractness** over **concreteness,** as well as the score that indicates the extent to which a person emphasizes **action** over **reflection**. The inventory comprises lists of words, such as "logical", "analytical", "feeling" and " mutative", which participants are required to rank according to how they feel the words best describe their learning style. This procedure yields scores that relate to each of the four learning modes, namely concrete experience, reflective observation, abstract conceptualization and active experimentation, respectively.

Kolb (1984:68) indicates that the first score shows the position on the abstract-concrete dimension of the Kolb model of experimental learning, and the second score shows the position on the active-reflective dimension of the model. Thus, it becomes possible to identify an individual's learning style. As part of the learning programme, educators will be provided with an example of how to assist learners to know their learning style preference/s (*cf.* Chapter 6).

As the teaching and learning programme that was designed in the context of the study aimed at providing guidelines to educators on how to adapt their teaching practices to accommodate diverse learning styles, the teaching methods and strategies to achieve this, are explored in the section below.

3.6 TEACHING METHODS AND STRATEGIES TO ACCOMMODATE LEARNING STYLE DIVERSITY

Teaching methods, are according to Mabena (2004:15), broad plans of action for teaching learning activities with the idea of achieving one or more outcomes, while a teaching strategy guides the approach that educators will take in managing learning activities (Kramer, 2006:100). Each teaching method encompasses a variety of strategies.

Mahaye and Jacobs (2007:175) add that teaching methods are particular techniques that educators use to assist different learners to gain knowledge to be able to achieve expected and desired Learning Outcomes. Killen (1998:11) and Mahaye and Jacobs (2007:176) explain teaching methods as a way of sensing, thinking, and feeling during teaching. This explanation clearly points to the fact that teaching should accommodate the wide variety of learning styles, as highlighted in 3.3. In essence, four teaching methods with their respective strategies that will allow learners to sense, reflect, think and do, can be distinguished, namely the Direct, Indirect, Independent and Interactive Teaching Methods (Kramer, 2006:100-106). Each of these methods links well with particular learning style needs of learners (Schraw & Olafson, 2003:185; Schraw & Olafson, 2008:25-41). In the following sections, different teaching methods and strategies are explored and linked to diverse learning style needs.

In the structuring of section 3.6, previous research conducted by Grosser (2001) and Maja (2006) provided suitable frameworks for elucidating the variety of teaching methods and strategies, which I found valuable to use in the context of my study.

3.6.1 Direct Teaching Method

The Direct Teaching Method is educator-centred. The educator delivers the content and directs all learner activities (Burden & Byrd, 2003:120; Kramer, 2006:100; Monyai, 2006:107-112; Arends, 2009:290-295; Gunter, Estes & Mintz, 2010:70-84). According to Mahaye and Jacobs (2007:175), the advantage, of this method is presenting information, facts, concepts and new

ideas. It is suitable for teaching cognitive objectives relating to recall and recognition of facts. The disadvantage, however, is that it does not develop skills and understanding.

The Direct Teaching Method involves a variety of techniques/strategies that can be employed to create diverse activities in the classroom, and does not refer to the educator merely lecturing a group of learners. The following table, Table 3.1 illustrates the application of the Direct Teaching Method according to Grosser (2001:4) and Maja (2006:38).

Table 3.1: Techniques/strategies for the Direct Teaching Method

TECHNIQUES/STRATEGIES	APPLICATION
Presentation	Educator guides the discussion with oral presentation.
Demonstration	Educators illustrate skill or principles.
Lecture	Educators present talk with visual aids while learners take notes.
Drill and practice	Educators present examples and learners do problem-solving.
Dictation	Educators speak or read and learners write exactly what is said.
Guided writing, reading or listening	Educators use structured format to lead learners towards specific Learning Outcomes.
Guided work sheets with corrective feedback	Educators guide class work through work sheets step by step.
Didactic questioning	Educators lead learners by asking questions, starting from lower to higher–order questions.
Visitor presentations	Presentations by visitors from the community, parents, celebrities, role models.
Video, film, tape, radio presentation	Learners in class view presentations and take notes.

Killen (1998:4-6) and Gunter *et al*. (2010:70-84) mention the advantages and disadvantages of teaching learners by using the Direct Teaching Method :

Advantages:

- The educator has full control of the learning content.
- Educators are able to emphasize important points and possible difficulties.
- Factual knowledge is imparted effectively to low achievers.
- A lot of information can be given in a short time.
- This method is equally effective in small and in large classes.
- This method assists educators to stimulate learners by displaying their personal interest of the subject.
- Educators create a non-threatening environment for learners, learners are not forced to be active participants and embarrassment is avoided as they do not display their ignorance or shyness (Maja, 2006:39).

Disadvantages

- This method does not cater for diverse learners, their prior knowledge, learning pace, cognition level, learning styles or learners' interest in the subject matter.
- The success of this method depends heavily on the image the educator portrays.
- This method assumes that learners are able to obtain information through listening, observation and note taking.
- It does not foster social and interpersonal skill development due to its limited learner activity.
- It might have a negative impact on the learners' skills such as problem-solving, creativity, explanation and enquiry.
- During a demonstration lesson, learners may not see what the educator wants them to see.
- It presents learners with educators' views on how to organize content.
- It limits learners' feedback to educators concerning their level of understanding.

- It does not often hold learners' attention span for more than fifteen minutes.
- It gives learners an impression that they have to be told what to do by the educator all the time (Maja, 2006:39).

Grosser (2001:23) indicates that the Direct Teaching Method is important and a crucial component of all teaching and learning, but, as with all things, it should be part of the overall approach to teaching, rather than the only approach. I therefore argue that the aforementioned discussion indicates that only certain learners, namely Convergers (Sensors/Feelers) and Divergers (Watchers) will be accommodated when this method is utilized most of the time. I base my argument on the fact that these learners prefer to learn through perception, observation and rely on experience, which will be possible when the educator guides discussions, presentations, demonstrations and use the lecture method (*cf.* 3.3.1). Assimilators (Thinkers) and Accommodators (Doers) will be left out if this method is used on a continuous basis, as this method does not foster active, interpersonal learning and independent questioning of information favoured by the Assimilators and Accommodators, respectively.

3.6.2 Indirect Teaching Method

This method is characterized by a high degree of learner participation (Borich, 2003:94, 221; Kramer, 2006:101). Learners are highly and actively involved in their learning. This method develops higher-order thinking skills, personal values and individual responsibility for learning. However, it is not effective for learning facts, complex concepts, principles or processes that need systematic understanding (Kramer, 2006:101). The application of the Indirect Teaching Method involves the application of the following techniques/strategies as indicated in Table 3.2, according to Grosser (2001:26, 27) and Maja (2006:41).

Table 3.2: Techniques/strategies for the Indirect Teaching Method

TECHNIQUES/STRATEGIES	APPLICATION
Case studies	Learners understand facts, principles and concepts by studying a real or fictitious situation.
Interviews	Learners gather data on various topics from other people and specialists.
Surveys or drawing conclusions	Learners gather data about topics in order to make predictions and conclusions.
Group projects	Groups of learners collaborate on various projects.
Role-play and simulations	Learners prepare and simulate situations and characters.
Debates	Learners reach and build logical arguments to support a particular perspective in a debate.
Investigations and experiments	Learners undertake discipline-based procedures to learn principles and concepts.
Design-and-make activities	Learners plan and construct products or performances.
Theme posters and collages	Learners create an educational poster or collage to illustrate issues related to the topic.
Delivering lessons	Learners act as educators in planning and delivering a lesson.
Oral presentation	Learners prepare a fixed time presentation for class.
Field trips and site visits	Visits to authentic sites are used as a basis for learning topics and themes from the curriculum.
Concept maps	Learners create topic-based mind maps.

The following advantages and disadvantages are noted for the Indirect Teaching Method (Borich, 2003:94, 221; Kramer, 2006:101)

Advantages of the Indirect Teaching Method

- Learners are highly involved.

- Learners participate very actively and educators facilitate.
- This method has a high potential for higher order thinking skills development.
- The educator provides information as another source.
- Personal inquiry is encouraged (Maja, 2006:42).

Disadvantages

- It is not very effective for learning facts, principles or concepts step-by-step.
- It is time-consuming.
- It is challenging the educators who are comfortable with full control of the class (Maja, 2006:42).

The Indirect Method appears to accommodate learners who prefer learning through watching (Divergers) and thinking (Assimilators) best. The Assimilators (Thinkers) will be able to learn through logical analysis and create understanding for themselves through the case study activities, interviews, investigations and drawing conclusions, and the Divergers (Watchers) will enjoy being actively involved in role-plays and simulations where they can observe and reflect about what is happening (*cf.* 3.3.1). Learners are actively involved in constructing their own knowledge and experience opportunities for building higher order thinking skills, personal values and individual responsibility for learning (*cf.* 3.3.1).

3.6.3 Independent Teaching Method

When using the Independent Teaching Method, learning tasks are independently undertaken by a learner and the learner relies on his or her own efforts and thinks through every aspect of the task. The educator plays the role of directing and helping (Grosser, 2001:23; Ognibene, 2007:24-27; Philpott, 2009:38, 47). The following techniques/strategies as indicated in Table 3.3 characterise the Independent Teaching Method according to Grosser (2001:36) and Maja (2006:43).

Table 3.3: Techniques/strategies for the Independent Teaching Method

Homework	Work outside class and school time
Research projects	Information on the topic is collected, collated and presentations are made independently for analysis in class.
Learning centres	Special space is created in the classroom for learners to find and use resources for special tasks.
Interview tasks	Learners identify and conduct interviews with role models and present results in class.
Assigned questions	Educator prepares questions that learner works through. This is used to recall prior learning or to reinforce new learning.
Worksheets	Learners themselves work at their own pace
Equipment-assisted learning	Learners use computers, scientific or other equipment for learning. This ensures individual practicing of skills.
Crossword puzzles	Educators prepare crossword puzzles for learners to complete by means of research from books or notes.
One-on-one debate	Learners prepare own notes before discussion with a partner.
Writing assignments	Essays, paragraphs or sentences are done individually.

The Independent Teaching Method also makes use of the following techniques and strategies:

3.6.3.1 Questioning

According to Monyai (2006:130-134) and Mahaye and Jacobs (2007:188), questioning is a technique that can be used to link previous knowledge to new information. It is a basic key technique in a teaching and learning situation. Slavin (1997:244) mentions that questioning is used to direct the focus and attention of learners. Questioning arouses learners' interest, stimulates their thinking, and probes learning. Furthermore, questioning methods can be used effectively to promote reflection and to enhance learners' reasoning and

thinking skills when open-ended questions are used (Capel, Leask & Turner, 2003:83).

3.6.3.2 Discussion

This strategy implies a discourse between two or more people with a definite view in place (Killen, 1998:176). Learners are given opportunity to exchange their views freely (Killen, 1998:176; Mahaye & Jacobs, 2007:176; Arends, 2009:418). Van Rooy (2006:85) acknowledges that discussion is very learner-centred, and learners themselves can dictate the pace and format of the discussion. Discussions permit a great deal of interaction, participation and involvement by all learners in the learning situation (Arends, 418-438).

3.6.3.3 Problem-solving

Problem-solving allows learners to discuss things independently and practise to solve problems. Learners are inspired towards meaningful learning and it is a form of inquiry (Killen, 1998:106). Monyai (2006:114-118) and Mahaye and Jacobs (2007:199-200) assert that the effectiveness of this method is when the problems are real and challenging to learners and the complexity of the problems is in accordance with the learners' cognitive level. In problem-solving, learners are confronted with a situation in which some information is known and some information is needed in order to solve the problem. Problem-solving is a type of discovery learning which assists learners to apply the knowledge they already have in new or unfamiliar situations created by the problem and through this process to obtain new knowledge and skills (Van Rooy, 2006:105). Problem-solving challenges learners and involves them actively in the learning process. Furthermore, according to Van Rooy (2006:105), problem-solving assists learners to gain new knowledge and to feel responsible for their own learning; teaches learners that their solutions to problems should be accountable, usable and justified; develops critical thinking skills; keeps the learners' natural curiosity alive and assists learners to make considered judgments and take decisions.

3.6.3.4 Projects

This strategy allows learners to participate in a project that is designed either by the educator or by learners themselves (Mahaye & Jacobs, 2007:196). The use of projects is based on purposeful activities that have to flow from learners' natural interest in a task, which can be a problem in their everyday lives. When using projects, educators give purposeful guidance to provide learners with information on the method to follow in order to solve the problem, and sources to consult. Learners do investigations on different aspects of the problem individually, and combine their joint findings to accommodate a particular problem (Mahaye & Jacobs, 2007:196).

Killen (1998:104-110) and Mahaye and Jacobs (2007:200) set out the advantages of the Independent Teaching Method as helping learners to master content more effectively for they have an opportunity to think, counterbalance and sift information in order to perceive relationships and concepts. According to my view, problem-solving assists learners to become more able to develop their individual abilities because it gives them freedom to investigate, display their initiatives, plan solutions and develop their unique talents in the process. In addition to this, problem-solving encourages learners to develop critical and creative thinking skills, to debate ideas among themselves and make enquiries regarding the meaning of words and concepts and promotes interaction and teamwork among learners, thus enhancing interpersonal skills.

In summary, as discussed above, this method of teaching encourages a learner to undertake a learning task by himself/herself. The learner relies on his/her own efforts and thinks through every aspect of the task without constant and close management by the educator. The Independent Teaching Method appears to be best suited to learners who prefer learning by observing (Divergers (Watchers) and thinking (Assimilators) (*cf.* 3.3.1). According to my opinion, the Independent Teaching Method will appeal to Divergers (Watchers) as they will get the chance to reflect independently on questions and discussions. The Assimilators (Thinkers) will enjoy the Independent

Teaching Method, as they will get opportunities to do independent investigations.

3.6.4 Interactive Teaching Method

According to Grosser (2001:45), Kramer (2006:104), Du Plessis, Conley and Du Plessis (2007:30) and Ognibene (2007:30), educators and learners cooperate in the learning adventure by engaging in interactive dialogue. The focus in this method is on thinking, processing information, dialogue and reasoning. In Table 3.4, different techniques and strategies for the application of the Interactive Teaching Method are provided.

Table 3.4: Techniques/strategies for the Interactive Teaching Method (Grosser, 2001: 52, Maja, 2006:51-52)

TECHNIQUES/STRATEGIES	APPLICATION
Simulations and role-play	Each leaner takes the role of a character and plays the role in accommodating an issue.
Fishbowls	One group of learners sits in a circle facing one another to discuss an issue related to a topic. The rest of the class sits in an outer circle, taking notes and watching. Different groups get a chance to sit in the middle and to discuss different issues. All groups receive a task based on the discussion to be completed. Each group submits a final report for assessment.
Round table (written) or round robin (oral)	Groups are given a single pen and a piece of paper to answer a question(s) in a test. Each group member writes down one sentence/fact before passing the pen and paper on to the next member who writes the next line/fact and passes it on. Learners may pass on an answer. Groups are assessed for their group effort.
Brainstorming	Learners generate different ideas to solve problems or to discuss an appropriate topic.

TECHNIQUES/STRATEGIES	APPLICATION
Numbered-heads together	Every member is allocated a number. The educator asks the question. Learners decide on a correct answer. The educator calls one learner to give the correct answer.
Train questions	Groups sit in lines one behind each other. The educator or group members pose questions (written or oral). The test questions then rotate among the group members. The first member answers or passes it to the next member, who will answer question 2 and so forth. If all the questions are not answered in the given period, the group loses marks.
Buddy system	Learners are grouped in pairs to discuss issues. Partners discuss questions or check one another's work or share ideas.
Telstar techniques	Learners are grouped and they elect the spokesperson to debate an issue. All selected spokespersons sit in an inner circle to debate. Group members may pass notes, suggestions or ideas on to the spokesperson from the outside of the circle.

Killen (1998:64) explains the advantages of the interactive method *inter alia* as follows: it allows educators to vary tasks according to the diversity of learners; learners are all given an opportunity to take part and multiple approaches to problem-solving are encouraged.

In summary, I argue that Accommodators (Doers) and Assimilators (Thinkers) will probably learn effectively using Interactive Teaching Strategies, as the interactive strategies provide opportunities for learning through their respective preferences, namely autonomous, independent and individual-centred instruction, as well as for working together with others (*cf.* 3.3.1). It is therefore important that when the Interactive Teaching Method is used, that the focus is not only on collaborative work, but also on opportunities for independent work.

It is also clear from the preceding discussion on teaching methods and strategies that educators need to employ all the teaching methods in a

balanced way in order to accommodate all the learning style needs in their classrooms.

The discussion that follows focuses on the learning activities that can be employed to accommodate the learning style needs in Life Orientation classroom settings.

3.7 LEARNING ACTIVITIES TO ACCOMMODATE LEARNING STYLE NEEDS

According to Van Rensburg (2002:179), learning activities are those activities that take place when learning occurs. They may include small group discussions, creative problem solving, role-playing, brainstorming and project work. The choice of learning activities involves the application of a number of teaching strategies (*cf.* 3.6.1 – 3.6.4) in order to perform these activities (Van Rensburg, 2002:179). Pintrich and Johnson (1996:83) point out that the crucial aspects for performing learning activities are knowledge of one's own cognition and motivation. They mention that the characteristics of how a learner learns have an influence on what the learner learns and how well he or she adapts to the learning environment. This will have an effect on how the learner performs during a learning activity. The teaching and learning environment must be organized in such a way that it enhances and provides learning activities that match with the learners' learning styles (Van Rensburg, 2002:179). In support of the viewpoint of Kolb (1984:199), who argues for experiential learning that should move through a cycle of sensing, watching, thinking and doing (*cf.* 3.3.13), Arndt and Underwood (1990:30) similarly also advocate that educational programmes must begin with activities for learners who are Convergers (Sensors/Feelers), followed with activities for Assimilators (Thinkers) and Convergers (Watchers) and lastly, the Accommodators (Doers). The order of the activities as suggested by the authors is as follows:

- Connecting to the learners' concrete experience (Sensors/Convergers)
- Providing logical information (Thinkers/Assimilators)

- Providing opportunities to think about and experiment with what has been learned (Divergers)
- Designing a plan to fit with reality (Accommodators)

In Table 3.5, I report on Sutliff and Baldwin's (2001:270) classification for learning activities that accommodate different learning styles.

Table 3.5: Learning styles and learning activities

Learning style	Learning activity
1. Convergers (Sensors/Feelers)	Small group discussion Providing specific examples Practical exercises Simulations, games Role-playing
2. Divergers (Watchers)	Creative problem-solving Personal journals Discussion groups Questions Reflection activities Brainstorming Observations
3. Assimilators (Thinkers)	Lectures, papers, analogies Model-building Theory-building Case studies Questioning

Learning style	Learning activity
4. Accommodators (Doers)	Group activities Fieldwork Projects Homework

Linked to Table 3.5, is the description of learning style needs according to Kolb (1984:199) (*cf*. 3.3.1). In the subsequent sections, I interpret relationships between the indicated learning activities and the learning style needs.

3.7.1 Convergers (Sensors and Feelers) and learning activities

The following learning activities are suitable to accommodate the learning style needs of Convergers (Sensors/Feelers):

- Small group discussions assist the Convergers to learn effectively by participating in small groups where they will be able to learn by seeing, feeling and hearing.
- The provision of specific examples during learning will enhance visual learning that is preferred by Convergers.
- Practical exercises will provide opportunities to the learners who enjoy learning by touching and feeling.
- Simulations, games and role-playing will allow for active participation and experience during learning.

3.7.2 Divergers (Watchers) and learning activities

The following learning activities are suitable to accommodate the learning style needs of Divergers (Watchers):

- Creative problem-solving will allow them to engage in inductive thinking, which is a preferred way of learning for Divergers.

- Creating personal journals will provide opportunities for reflecting on learning experiences. Reflection forms an integral part of the learning style of Divergers.
- Discussion groups and brainstorming will be preferred by Divergers as this will allow them to engage in verbal learning which they prefer.
- Questioning will engage Divergers in thinking activities and provide opportunities for verbal and auditory learning, which they enjoy.
- Reflection activities will allow Divergers the opportunity to make meaning on their own.
- Observations are suitable for Divergers as observations allow for learning through perception.

3.7.3 Assimilators (Thinkers) and learning activities

The following learning activities are suitable to accommodate the learning style needs of Assimilators (Thinkers):

- Lectures, papers and analogies are preferred by Assimilators because these activities will give them the chance to do what they prefer, namely to analyse ideas logically and create understanding for themselves.
- Model-building and theory-building will engage Assimilators in intrapersonal learning, which they are comfortable with.
- Assimilators will enjoy working on case studies where they get the chance to apply knowledge and skills to unfamiliar contexts.
- The use of questioning will provoke the thinker's thoughts (*cf*. 3.2.1.1, 3.2.1.6).

3.7.4 Accommodators (Doers) and learning activities

The following learning activities are suitable to accommodate the learning style needs of Accommodators (Doers):

- Fieldwork activities are enjoyed by Accommodators because they involve them in practical and hands on experience.

- Projects allow Thinkers/Accommodators to demonstrate their ability to apply knowledge gained and skills acquired, which is preferred by Accommodators.
- Homework gives the Accommodator the opportunity to demonstrate independently what has been learnt

As the choice of assessment approaches during teaching also need to accommodate diverse learning style needs, the following section links different assessment approaches to diverse learning style needs.

3.8 ASSESSMENT APPROACHES TO ACCOMMODATE LEARNING STYLE NEEDS

According to the Department of Education (SA, 2007:7), educators should use a variety of assessment approaches to accommodate diverse learner needs. Assessment methods refer to the type of assessment that educators use to assess learners' competence (Dreyer, 2008:84). Assessment methods can refer to the following: educator assessment, peer assessment, self-assessment or group assessment. Assessment strategies refer to structured activities that educators select to enable learners to provide responses or produce evidence of competence (Dreyer, 2008:84). In addition to the aforementioned, Chapman and Gregory (2002:66) indicate that assessment strategies are guidelines employed by educators to assist with the development of different types of assessment measures.

Two major approaches to assessment can be distinguished, namely **assessment of learning** and **assessment for learning** (Stiggins, 2002:759). Within each of these approaches, methods and strategies of assessment are utilized. Each of these approaches and the learning style needs that they accommodate is explained in the sections that follow below.

3.8.1 Assessment of learning

Assessment of learning which is traditional and **summative** in nature, views learning as a product and is mainly educator-centred (Chappius & Stiggins, 2002:40-43). This approach depends on assessment that focuses on the

achievements of learners as reflected in test and examination scores, and its main purpose is to inform the stakeholders in education of the extent to which the learners have progressed (Chappius & Stiggins, 2002:42). According to Stiggins (2002:759), assessment of learning does not accommodate the needs of the learners, but those of the policy makers and education officials, and is meant for public accountability and the raising of standards. Arter and Busick, (2001:227) and Chappius and Stiggins (2002:43) contend that assessment of learning encourages rote learning and the majority of educators are familiar with educational practices that promote this type of learning. Furthermore, the writers mention that teaching, learning and assessment activities that take place within the context of assessment of learning are simple to formulate, teach and assess, but unfortunately do not promote meaningful learning.

According to Van der Horst and McDonald (1997:26-27), assessment of learning does not focus on the development of the learners' learning needs and interests. Learners are viewed as empty vessels, whose main role is to acquire and accumulate knowledge passively, memorize and retain facts and accurately recall them (Mayer, 2002:226-228).

The main purpose of assessment of learning is the mastery of course content and retention of knowledge. The assessment processes, entailed in assessment of learning encourage and influence learners to learn when there is a test or examination to be written (Van der Horst & McDonald, 1997:28).

In analysing the principles entailed in the assessment of learning, it is evident that this form of assessment appears to be confined to a particular learning style, namely learners who prefer acquiring knowledge passively as opposed to those who prefer involvement in discovering knowledge. According to my viewpoint, the assessment principles entailed in this approach promote learning and development, which could place a learner's functioning at a certain minimal level of thinking and reasoning if only objective test items, which require one answer, are used. It would be reasonable to assume that Convergers (Sensors/Feelers) and Divergers (Watchers) will prefer this type of approach to assessment.

Objective tests require learners' structured responses, include short answers, completion items, and selection type items such as multiple choice, true/false and matching items. This strategy would possibly suit the Divergers (Watchers) and Convergers (Sensors/Feelers) the best, since their learning preferences are intuitive and they rely on perception and observation, respectively (*cf.* 3.3.1). Learners acquire knowledge by memorization and develop skills for remembering. This approach does not engage learners in learning activities characterized by creativity and originality that are preferred by Assimilators (Thinkers) and Accommodators (Doers). If subjective test items that call for the application of higher-order thinking skills such as interpretation and analysis are used, Assimilators (Thinkers) might be accommodated as well in an assessment of learning approach. Essay questions provide the freedom of response to assess the ability of learners to demonstrate reasoning abilities and to apply skills in order for educators to interpret complex achievement. The Assimilators (Thinkers) could do very well in this strategy because they learn preferably by analysing logically (Kramer, 2006:50).

Although assessment of learning can easily focus on knowledge development and neglect the development of other cognitive processes of the learners, the approach cannot and should not be discarded, but should be balanced with the assessment for learning approach in order to accommodate all learning styles during teaching and learning.

3.8.2 Assessment for learning

Assessment for learning is an assessment approach that is more **formative** in nature and focuses on the outcomes of learning and individual needs of learners (Stiggins, 2002:761). In this assessment approach, the learner's needs and interests are placed at the centre of teaching and learning, and the holistic development of learners is promoted through this approach. According to Chappius and Stiggins (2002:40-43), assessment processes in this approach are designed specifically for the development of learners in totality by focusing on the assessment of knowledge, skills, values and attitudes. Assessment for learning encourages teaching and learning, which is

characterized by the use of a variety of assessment strategies/techniques (Assessment Reform Group, 1999:31). The assessment techniques and strategies enable learners to develop skills, construct, and transfer knowledge.

Assessment for learning is based on the idea that learners will improve highly if they understand the aim of their learning, where they are in relation to this aim and how they can achieve the aim or close the gap in their knowledge (Rault-Smith, 2009:12). In assessment for learning learners' performances are not compared with one another, but are measured against set criteria (Maree & Fraser, 2004:34).

Key characteristics of assessment for learning are:

- using effective questioning techniques;
- using marking and feedback strategies;
- sharing learning goals; and
- peer and self-assessment.

Assessment for learning emphasizes the holistic development, growth, achievement and progress of each individual learner (Barootchi & Keshavarz, 2002:280). According to Davies and Waverly (2005:1), this approach leaves room for the application of a range of assessment techniques/strategies, among others projects, performances, practical work, cooperative learning groups, peer tutoring, journals, exhibitions and portfolios.

Assessment for learning does not focus only on the development of intellectual abilities, but promotes the development of critical thinking, reasoning and problem-solving (Mayer, 2002:227-230). During assessment for learning, the educator may employ self and peer assessment. Self-assessment refers to the form of assessment conducted by the learner him/herself (Stiggins, 2002:761-762). **Self-assessment** activities provide opportunities for learners to think critically about their own work and reflect on their work. (Black, Harrison, Lee, Marshall & William, 2004:9). Clearly, self-assessment is a method that would be preferred by Divergers (Watchers) and

Assimilators (Thinkers) since they prefer to analyse logically and create understanding for themselves, and enjoy reflecting on information and actions, respectively.

Assessment for learning encourages **peer assessment** as well. This assessment method creates an opportunity for the learners to assess one another in the classroom (Tlokotsi, 2008:57). Accommodators (Doers) would possibly be best accommodated when peer assessment is used, because they enjoy intrapersonal activities that enable them to be involved and to do something (*cf.* 3.3.1, 3.3.6).

Assessment for learning allows opportunities for **group assessment.** Learners who complete learning tasks in groups and assess one another on their contributions conduct group assessment (Marnewick & Rouhani, 2007:278). The three learning styles that could probably be best accommodated with group assessment are Convergers (Sensors/Feelers), Divergers (Watchers), as well as the Accommodators (Doers). Group assessment will allow Convergers (Sensors/Feelers) to be involved by relying on their experience and perception of a completed task. Divergers (Watchers) will be able to reflect on the quality of a performed task during group assessment, and Accommodators (Doers) will enjoy doing something that is hands-on and interpersonal in nature (*cf.* 3.3.1, 3.3.6).

According to Maree and Fraser (2004:51), assessment strategies and activities include objective tests, essay tests, personal communication and performance-based assessment. Le Grange and Reddy (1998:9) add research projects, assignments, surveys, demonstrations, role-plays, debates, tests, examinations, panel discussions, interviews, drama, field trips, practical investigations, presentations, simulation games, film and video, and group work to the list of possible assessment strategies that could be used by educators. It is clear from the aforementioned list of assessment strategies that they link well with the learning activities such as group discussions, problem solving, role-play brainstorming and project work that were explored in 3.7.

The personal communication strategy according to Maree and Fraser (2004:53), takes a variety of forms, including questions and answers, oral examinations, interviews and journals. The following strategies are identified:

- Oral question assessment is employed continuously in teaching to monitor the understanding of learners. Learners are asked questions about their understanding of the content or process, or educators engage learners in verbal interaction individually or in groups. The Convergers (Sensors/Feelers) and Divergers (Watchers) might do well in this strategy because of their learning preferences that are based on sensing, perception and observation and reflection, respectively (*cf*. 3.3.1, 3.3.6). They can answer questions based on what they have seen, heard, observed, felt and perceived. Oral questioning also has a strong verbal component, which is preferred by Divergers (Watchers).
- Self-report assessment reveals how learners think about themselves or how they rate themselves. This strategy appears to best suit the Assimilators (Thinkers) and Accommodators (Doers) since they prefer to learn by creating understanding for themselves, by reading theory and studying by themselves (*cf*. 3.3.1, 3.3.6).
- Performance-based assessment requires the demonstration of skills or proficiency through creating, producing or performing something. This strategy requires learners to perform tasks rather than merely answering questions. Accommodators (Doers) will probably prefer performance-bases assessment because they prefer practice and enjoy learning activities that enable them to do something, and learn through perception and observation, respectively (*cf.* 3.3.1, 3.3.6).

Assessment for learning will allow learners to construct knowledge and develop effective thinking skills for creating ideas and solving problems, which hold advantages or learners who prefer thinking during learning. In the context of the study, I argue strongly for the use of assessment for learning in conjunction with assessment of learning, in order to provide a balanced approach to assessment that will accommodate a variety of learning styles.

In reviewing the preceding discussions related to the choice of teaching methods and strategies, learning activities and assessment approaches, I explain my argument for a balanced approach to teaching, learning and assessment in the following section.

3.9 BALANCING TEACHING, LEARNING AND ASSESSMENT

As indicated by Lomofsky and Lazarus (2001:312) and Donald *et al.* (2002:45-68) (*cf.* 2.3.3.4), inclusive education calls for educators to change their assumptions and beliefs about teaching, learning and assessment to accommodate learning style diversity.

Educators' assumptions and beliefs about how knowledge is acquired can have an influence on the way they make decisions about the choice of teaching methods and strategies, learning activities and assessment approaches, which they utilize in their classrooms (Chan, 2008:264; Muis & Sinatra, 2008:164; Schraw & Olafson, 2008:25-41). In this regard, Prawat and Floden (in Schraw & Olafson 2003:184) refer to educators' epistemological beliefs about knowledge and knowledge acquisition, which could be "*realist", "contextualist",* or "*relativist"* in nature.

Realist educators believe in an educator-centred approach to teaching, learning and assessment and an unchanging body of objective knowledge, which has to be transmitted to learners. They favour assessment of learning (*cf.* 3.8.1.1) by means of tests and exams as it is important for them to determine how much learners have learned (Schraw & Olafson, 2003:186).

Contextualist educators focus on shared and collaborative understanding, as knowledge, according to them, change over time and learners need to become constructors of their own knowledge (Schraw & Olafson, 2003:186). Contextualist educators are keener to use assessment for learning where learners are involved in peer assessment and self-assessment (*cf*. 3.8.2). For contextualist educators it is important that learners take control of their own growth and development (Schraw & Olafson, 2003:186).

In the classroom of a **relativist educator** learners construct knowledge on their own that is unique and different, but equal to the knowledge constructed by their peers. Relativist educators create opportunities for learners to work and think independently. They assess learners by using a variety of assessment strategies and are more concerned with the process of learning than the product of learning (Schraw & Olafson, 2003:187, 191; Schraw & Olafson, 2008:25-41).

In classrooms where the focus is on collaborative and independent learning, learners get the opportunity to develop as thinkers, take part in discussion, decision-making and problem-solving.

Based on the aforementioned explication of beliefs about knowledge and knowledge acquisition, I argue that a specific belief will favour a specific way of teaching, learning and assessment, thus accommodating a specific learning style. An inclusive classroom will accommodate learners with many different learning styles and preferences or a combination of styles and preferences. It is important that educators understand the variety of learning style needs in order to adapt their approach to teaching, learning and assessment in order to accommodate the pedagogical needs of the learners in the classroom. The disadvantages of always teaching the same way or providing similar learning opportunities are clear. Some learners will always enjoy lessons, actively participate and do well while others might be passive and struggle all the time. In time, some learners could be seen as good, dedicated and talented while others might be labelled slow, bored or difficult.

In order to accommodate all learning style needs, educators need to balance the various beliefs about knowledge acquisition when making decisions about the choice of teaching methods and strategies, learning activities and assessment approaches. In this regard, Hofer and Pintrich (in Sing & Khine, 2008:288) argue for epistemological development among educators to enable them to create learning environments and opportunities for learners to experience teaching, learning and assessment according to their learning preferences. In addition to the aforementioned argument, Felder (1996:18) (*cf.* 3.4) argues that learners also have to learn according to their not-

preferred learning styles. Educators therefore have to frame their teaching practice in all of the mentioned epistemological beliefs, and not only the belief/s they favour or are feeling most comfortable with using. If educators succeed in striking a balance between the various epistemological beliefs, De Waal and Grosser (2009:801) argue that learners' fundamental rights will be enhanced and pedagogical safety and security promoted.

In addition to the aforementioned, it is also important for meaningful learning that educators make sure that learners complete the whole cycle of the learning process as indicated by Kolb (1984:199). The achievement of outcomes should have required learners to experience learning through their senses, have time to observe and reflect as well as to think and act. The former statement indicates that although learners may prefer certain learning styles, they also need to be exposed to learning styles which they do not favour, and concurs with the viewpoint of Felder (1996:18) (*cf*. 3.4). By focusing on teaching with the learning cycle in mind, educators will be able to accommodate the four major learning style needs.

In order to provide a summary of the sections devoted to teaching methods and strategies, learning activities, assessment approaches and teaching beliefs that underpin teaching, learning and assessment in the classroom, I provide an overview of the important facts in the aforementioned sections and establish a link with the diverse learning style needs of learners in Table 3.6 below

Table 3.6: A balanced approach to teaching, learning and assessment (adapted from Grosser & De Waal, 2006:21)			
Learning style	**Teaching methods and learning activities**	**Assessment methods**	**Epistemological belief that underpin teaching, learning and assessment**
Convergers	Direct teaching Lectures, presentations, demonstrations Visual and auditory learning Examples of activities: Simulations, games, role-play	Educator assessment Group assessment	Realist
Divergers	Direct teaching Indirect teaching Lectures, presentations, demonstrations Observing, watching, reflecting Examples of activities: Simulations, games, role-play	Educator assessment Group assessment Self-assessment	Realist Contextualist
Assimilators	Indirect teaching Independent learning Examples of activities: Lectures, model-building, debates, theory-building, case studies, questioning, debates, discussion	Educator assessment: subjective essay questions Self-assessment	Contextualist

Table 3.6: A balanced approach to teaching, learning and assessment (adapted from Grosser & De Waal, 2006:21)			
Learning style	**Teaching methods and learning activities**	**Assessment methods**	**Epistemological belief that underpin teaching, learning and assessment**
Accommodators	Interactive/collaborative teaching and learning Research projects, assignments, crossword puzzles, discussions, problem-solving, surveys, design-and-make activities	Analyzing, synthesizing, assignments, mind maps Self-assessment Educator assessment: essay questions	Relativist

Table 3.6 indicates that in order to avoid pedagogical barriers occurring in the classroom, educators need to balance teaching, learning and assessment with all the different learning style needs in their classrooms. All three epistemological beliefs (realist, contextualist, relativist) should form part of the teaching and learning situation, as each belief accommodates a specific learning style need. Emphasising one belief only, will imply that only certain learning style needs will be accommodated in the classroom.

In the last section of this chapter, I focus on providing an overview of what the Learning Area Life Orientation entails, and provide examples of the possibilities to accommodate diverse learning styles through the subject content.

3.10 ACCOMMODATING LEARNING STYLE NEEDS IN LIFE ORIENTATION

3.10.1 Introduction

The Learning Area Life Orientation guides and prepares learners for life, and equips them for meaningful and successful living in a fast changing and transforming society. According to the Department of Education (SA, 2002:4), Life Orientation is central to the holistic development of learners. It is concerned with the social, personal, intellectual, emotional and physical growth of learners and the interrelatedness of these aspects. In accommodating these aspects, knowledge, skills, values and attitudes are developed to empower learners to make decisions regarding the following aspects: health promotion, social development, personal development, physical development and orientation to the world of work. I argue that the nature of the topics that need to be taught in each of these areas allows for a variety of ways to teach and assess the learners so that all learning style needs can be accommodated (*cf.* 3.10.2.1).

3.10.2 The purpose of Life Orientation

The main purpose of Life Orientation is to empower learners to use their talents to achieve their full physical, intellectual, personal, emotional and

social potential. The learners' skills will be developed to respond positively and bring contribution to family, community and society, while the constitutional values are being practised (SA, 2002:4). Learners are taught to exercise their constitutional rights and responsibilities to respect others and be culturally and religiously tolerant towards one another. All learners are guided to be able to make informed and accountable decisions on their moral responsibility, their health and environment. Through Life Orientation, learners will be motivated to acquire practical skills that will help them to respond to challenges and participate actively and responsibly in the economy and in society (SA, 2002:4).

3.10.2.1 The scope and characteristics of Life Orientation

The Life Orientation Learning Statement focuses on the holistic development of diverse learners by:

- enabling learners to make informed decisions about personal, community and environmental health promotion;
- enabling learners through knowledge to form positive social relationships and exercise their constitutional rights and responsibilities.
- empowering learners to achieve and expand their personal potential to contribute positively to society and to cope with and respond to the challenges of the world;
- promoting physical development as an integral part of social, cognitive and emotional development of learners from their early childhood through to the General Education and Training Band; and
- developing a positive orientation to study and work, as well as the ability to make informed decisions concerning further studies and careers (SA, 2002:10).

A close examination of the highlighted characteristics point to the fact that teaching, learning and assessment can be varied. The scope of Life Orientation allows for sensory experiences, reflective observation, thinking

and doing during teaching, learning and assessment, which augur well with the learning cycle of Kolb (1984:199) (*cf*. 3.3.13).

In the subsequent sections the variety of teaching methods and strategies, learning activities and assessment approaches applicable to Life Orientation are explored.

3.10.3 Teaching methods, strategies and activities for Life Orientation

As Life Orientation has its own scope and characteristics which distinguish it from other subjects, Burris, Kitchel, Molina, Vincent and Warner (2008:45) tabulate the teaching methods and strategies most appropriate for teaching Life Orientation in the Intermediate Phase (Grade 4) as follows:

Table 3.7: Teaching methods and strategies to address diverse learning styles

Teaching methods/strategies	Learning style
Direct method • lectures • demonstrations • team teaching • video, film, tape, radio presentation • note-taking • role-play	Divergers/Watchers Convergers/Sensors/Feelers
Indirect method • discussions • group project • case studies • oral presentation • interviews • role-plays and simulations	Divergers/Watchers Assimilators/Thinkers

Teaching methods/strategies	Learning style
Independent method • home works • assignments • research projects • crossword puzzles • theme posters and collages • design and making	Divergers/Watchers Assimilators/Thinkers
Interactive method • role-play • discussion • simulations • questioning • brainstorming • projects	Accommodators/Doers

Linked to Table 3.7, Grosser and De Waal (2006:21) and Prashing (2006:15) mention that both the Convergers (Sensors/Feelers) and Divergers (Watchers) prefer direct transmission, i.e. educator-centred teaching which involves lecturing, presentations, demonstrations, drill and practice. Accommodators (Doers) learn effectively with indirect, transactional, interactive teaching, through facilitation and cooperative learning. Strategies to be utilized in this approach include research projects, assignments, crossword puzzles, discussions, problem-solving, surveys, design-and-make activities, debates, as well as role-plays and simulations. The authors Grosser and De Waal (2006:21) and Prashing (2006:15), mention that the Assimilators (Thinkers) prefer autonomous, independent and individual-centred instruction, which involves the construction of concept maps, completing case studies, taking part in debates, oral presentations and brainstorming activities, and the completion of worksheets. In the context of the study, I looked for evidence to support the fact that educators utilize the four above-mentioned teaching methods during instruction in a balanced way.

3.10.4 Assessment strategies appropriate for Life Orientation

The Department of Education (SA, 2007:38-40) indicates the following assessment strategies that could be used by educators to assess learning achievement in Life Orientation, namely practical demonstrations, projects, research, tests, case studies, role-play, simulation, interviews, observations, questionnaires, structured questions and brainstorming. The variety mentioned, emphasizes the fact that it is possible and important to accommodate diverse learning styles in Life Orientation. Assessment should be continuous and formative, occurring at various times as part of instruction or during the learning process, as well as summative, occurring at the end of a learning experience (Marnewick & Rouhani, 2007:268, 269).

Practical demonstration

This form of assessment is part of performance–based assessment, which involves the educator who is actually observing the learners demonstrating specific practical skills. They are very useful for assessing how a learner draws on knowledge and values to carry out practical skills.

Projects

The activities in projects allow for a holistic assessment of learners' abilities to apply knowledge, skills and values in a relevant context. They involve substantial tasks in which learners illustrate or apply knowledge that they have gained.

Research

The tasks that are involved in research take form in the collection of data and information to solve a problem or to understand a particular set of circumstances and/or phenomena.

Tests

Tests consist of a range of questions to which learners are required to respond within a specific time. They are useful to assess knowledge, understanding and comprehension.

Case studies

Case studies are detailed descriptions of a specific situation or phenomenon. The description can be either real or made by the educator. Case studies can be taken from books, newspapers, magazines, videos or radio. They enable the educator to assess whether learners can apply knowledge, skills and values to an unfamiliar context.

Role-play

In this form of assessment, learners are presented with a situation, usually a problem or an incident, to which they have to respond by performing a particular role.

Simulation

Simulation usually involves educators setting up a situation that simulates reality. Learners occupy the role of a character and play a role in accommodating an issue, like deciding on an anti-smoking law. Learners' roles may be those of doctors, politicians, tobacco merchants and cigarette factory workers.

Interview

Interviewing involves a conversation between the assessor and the learner. This form of assessment is used to elicit information directly from learners, and consists of questions and observations.

Observations

This form of assessment involves the educator observing the learners constantly and informally to assess their understanding and progress.

Questionnaires

Questionnaires comprise written sets of questions asked by the educator to test the knowledge of learners.

Structured questions

Structured questions consist of stems (which describe situations), followed by a series of related statements or questions. The stem can be text, a diagram, a picture or a video. Structured questions can be used for recall of information, application of knowledge and understanding, analyses, debates and arguments

Brainstorming

This form of assessment involves learners using their thinking capacity to produce ideas linked to a situation. Brainstorming is usually done in groups and each group back provides feedback in the form of an oral report.

3.11 CHAPTER SUMMARY

This chapter addressed the diverse learning style needs as perceived by different authors (*cf.* 3.2). The following learning style models were investigated: Kolb's learning style classification, Dunn and Dunn's learning style model, the Meyers Briggs type indicator model of learning styles, the Hermann Brain Dominance Instrument Classification, the Felder-Silverman learning style model, Leider's learning style model, Schurr's learning style model, Roseberg's classification of learning styles, Armstrong's learning style model, Honey and Mumford's learning style model; Gregorc's learning style theory and the cognitive style model (*cf.* 3.3.1-3.3.12). According to these models, learners preferences for a particular way of learning can be linked to physiological preference, perceptual preference, personality aspects, stimuli imposed by the environment, emotional factors, sociological factors, styles to process information, level of dependency during teaching and the task functioning in the brain (*cf.* 3.3.13). Furthermore, the importance of accommodating learning style needs to unleash learner potential and to

enhance subject interest, motivation and willingness to learner was highlighted (*cf.* 3.4).

The chapter explored the application of a variety of teaching methods and their related strategies, namely Direct Teaching, Indirect Teaching, Independent and Interactive Teaching, in order to accommodate a wide variety of learning styles (*cf.* 3.6). Attention was paid to the different types of learning activities and assessment approaches that can be employed to accommodate learning style needs (*cf.* 3.7, *cf.* 3.8). In essence "variety" implies that learners should receive opportunities for sensory experience, reflective observation, abstract conceptualization and active experimentation during teaching, learning and assessment.

The importance of balancing teaching, learning and assessment with learning style needs were explained (*cf.* 3.9). Educators need to frame their teaching practice within a variety of epistemological beliefs, namely the realist, contextualist and relativist beliefs, if they want to accommodate all learning style needs.

The chapter was concluded by elucidating the numerous possibilities to accommodate learning style needs in Life Orientation (*cf.* 3.10), as evidenced in the wide scope and characteristics of the subject.

The following chapter, Chapter 4, elaborates on the empirical research design utilized in the study.

CHAPTER 4

EMPIRICAL RESEARCH DESIGN

4.1 INTRODUCTION

This chapter elucidates the research process that was followed to obtain data to gauge educators' understanding of learning style needs during teaching in inclusive Grade 4 Life Orientation classrooms and to explore how they accommodate diverse learning style needs.

The main purpose of this chapter is to give a comprehensive explanation of the:

- Aim and objectives of the study
- Research paradigm
- Empirical research design
- Methods of data collection
- Research participants
- Quality criteria (Trustworthiness)
- The role of the researcher in qualitative research
- Data analysis procedure
- Ethical considerations

4.2 AIM AND OBJECTIVES OF THE STUDY

The overall aim of the study was to gauge educators' understanding of learning style needs during teaching in inclusive Grade 4 Life Orientation classrooms and to explore how they accommodate diverse learning styles during teaching and learning in inclusive Grade 4 Life Orientation classroom settings. Based on the data obtained, examples of teaching, learning and assessment activities that were included as part of a teaching and learning programme were designed to assist and guide educators to accommodate

learning style needs in an inclusive Grade 4 Life Orientation classroom effectively.

The overall aim was operationalized in the following objectives:

- by determining the different learning style needs that educators need to accommodate during teaching in inclusive Grade 4 Life Orientation classrooms;
- by gauging educators' understanding of the different learning style needs of learners in inclusive Grade 4 Life Orientation classrooms;
- by establishing which teaching methods and strategies, learning activities and assessment methods and strategies could be utilized to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms;
- by gaining a deeper understanding of the application of teaching methods and strategies utilized during teaching to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms;
- by seeking clarity on the types of learning activities designed by educators to accommodate learning style diversity during teaching in inclusive Grade 4 Life Orientation classrooms;
- by exploring the assessment methods and strategies that educators utilize during teaching to accommodate diverse learning styles in inclusive Grade 4 Life Orientation classrooms;
- by exploring educators' perceptions about accommodating learning style diversity in inclusive Grade 4 Life Orientation classrooms; and
- by identifying components and processes to be included in examples of teaching, learning and assessment activities to be included in a teaching and learning programme to guide educators to address learning style diversity in inclusive Grade 4 Life Orientation classrooms.

Before any research can commence, a researcher has to locate the research within a research paradigm. The research paradigm guides the researcher in the choice of the research design, research strategy, methods of data collection and the procedures for the analysis of data.

4.3 RESEARCH PARADIGM

A research paradigm as described by Nieuwenhuis (2007a:47), is as a set of assumptions or beliefs about fundamental aspects of reality giving rise to a particular world-view. Lincoln and Guba, and Schwatz and Ogilvy (in Nieuwenhuis, 2007:48) point out that a paradigm represents what is thought about the world (but cannot be proved), and it enables telling a coherent *"story"* by depicting a world that is meaningful and functional, but culturally subjective. For Blanch and Durrheim (1999:481), a paradigm is an all-encompassing system of practice and thinking, which defines for the researchers the nature of their enquiry.

According to my understanding, a research paradigm implies my personal stance towards the way participants will be involved in the research, the role that I as the researcher will play during the collection of data, and how data will be best collected to answer the research questions.

In order to determine the guiding paradigm for my research I had to investigate the assumptions of existing paradigms in order to identify a suitable paradigm that would guide the choice of a research design, research strategy and methods for data analysis for my study.

4.3.1 Positivist paradigm

According to Creswell (2009:6), positivist research holds a deterministic philosophy in which causes probably determine effects or outcomes. The positivists also study the problem that reflects the need to identify and assess the causes that influence outcomes such as found in experiments. The positivist's knowledge is based on empirical observation and measurement of the objective reality that exists in the world and the world is understood through test and verification (Creswell, 2009:6). Henning, Van Rensburg and Smith (2004:17) points out that the positivist rejects metaphysics, and is about finding truth and providing it through empirical means. Positivists are concerned with describing, explaining and making predictions about phenomena that are investigated. According to the preceding explanation, the research participants will not be subjectively involved in the research, and

information or data collected objectively in the form of numbers. The researcher takes on an external stance towards the research, with the main aim to verify theory and to make predictions.

4.3.2 Post-positivist paradigm

Nieuwenhuis (2007a:65) asserts that post-positivism is a research tradition that falls between positivism and constructivism. Post-positivism is based on the assumption that knowledge is fallible and that reality exists, but may not be understood, as it is multiple, subjective and constructed by individuals. Post-positivism relates with both quantitative and qualitative methods of data collection and believes that humans respond both mechanically to and initiate their own actions in the environment (Maree & Van der Westhuizen, 2007:33). In contrast to mixed method research, that also utilizes quantitative and qualitative methods of data collection, post-positivist research does not aim to solve problems.

4.3.3 Interpretivist paradigm

According to Neuman (1997:69), an interpretivistic paradigm is an approach that develops an understanding of social life and discovers how people construct meaning in natural settings. He further explains that an interpretive researcher wants to learn what is meaningful or relevant to the people involved in the research. Henning *et al.* (2004:19-20) mentions that the interpretive researcher constructs knowledge by describing people's intentions, beliefs, values and reasons, meaning-making and self-understanding. The research phenomena and events are understood through a mental process of interpretation, which is influenced by and interacts with social contexts. Furthermore, the collection of information takes place in natural settings through unstructured observation, open interviewing, idiographic descriptions and qualitative data analysis that are all ways of capturing insider knowledge that is part of an interpretivist methodology.

The interpretivist paradigm, in contrast to the positivist paradigm, involves participants directly in the research, and verbal data is collected from the participants. The researcher adopts an internal stance to the research and is

directly involved with the participants in order to obtain a better understanding of the research phenomenon.

4.3.4 Critical theory

Henning *et al.* (2004:22) point out that critical theory aims at promoting critical consciousness and breaking down the institutional structures and arrangements that produce oppressive ideologies and social inequalities. Critical theory is guided by the lived experiences and social relations of participants, as this paradigm assumes that people can design their own worlds, and aims at political emancipation (Henning *et al.,* 2004:23, 24; Creswell, 2009:9). It is evident that this paradigm involves research participants in data collection with the aim to create social awareness for change.

4.3.5 Pragmatist paradigm

Creswell (2009:11) asserts that the pragmatic worldview arises out of actions, situations and consequences rather than antecedent conditions. Pragmatists maintain that, rather than focusing on methods, researchers emphasize the research problem and use pluralistic, quantitative and qualitative approaches to solve a research problem (Creswell, 2009:11).

In line with the viewpoint of Nieuwenhuis (2007a:59), my research was driven by the following assumptions:

- Human life can only be understood from within by sharing meanings, how people interact with or relate to one another. Research techniques that help with understanding of how people interpret and interact within their social environment are used in studying the phenomenon.
- Social life is a distinctively human product, and reality is socially constructed and not objectively determined. The underlying assumption is that by placing people in their social contexts, there is a greater opportunity to understand the perceptions they have of their own activities. It is crucial to understand and interpret the meanings constructed as every particular situation is unique.

- The human mind is the purposive source or origin of meaning. To develop a sense of understanding of the meaning imparted by people to phenomena and their social context, the richness, depth and complexity of the phenomenon should be explored. Through exploring and uncovering how meanings are constructed, insight is gained into meanings imparted and thereby improves comprehension of the whole.
- The social world does not exist independently of human knowledge.

Against the background of the previous assumptions, my study thus followed an interpretivistic paradigm as it strove to understand how educators in their everyday classroom settings construct meaning and explain what happens in their classrooms (Nieuwenhuis, 2007a:60). In this research, I acknowledged that people construct reality and that I needed to analyse the participants' discourses to gain a deeper understanding of their teaching practices (Maree & Van der Westhuizen, 2007:34). I focused on people and how they construct the social world by talking to them so that they could share their understanding with me, and observing them in their natural classroom settings.

Nieuwenhuis (2007a:58) concludes that the ultimate aim of the interpretivist researcher is to offer a perspective of a situation and to analyse the situation under study to provide insight into the way in which a particular group of people make sense of their situation or the phenomena they encounter.

The discussion below focuses on the empirical research design utilized in the context of the study.

4.4 EMPIRICAL RESEARCH DESIGN

The empirical research comprised two phases, namely a literature review and empirical research. Each of the phases is explained below.

4.4.1 Literature review

As part of the literature review, I reviewed primary and secondary literature sources. Primary literature is the original research studies or writings by a

theorist or a researcher. They contain the full text of a research report or a theory and are therefore more detailed and technical, while secondary literature provides a quick overview of research development on the topic (McMillan & Schumacher 2001:113).

The North- West University Library was visited to obtain the literature sources. The following databases were utilized to conduct the literature search: Eric, EBSCOHOST, SABINET and Dialogue. Key words and phrases that were used to conduct the literature search were *inclusion*, *barriers to learning*, *diverse learning styles*, *learning style needs, learning style models, pedagogical needs*, *pedagogical barriers*, *curriculum design*, *teaching methods, teaching styles, learning activities* and *assessment approaches*.

4.4.2 Research design

Creswell (2009:3) defines a research design as a plan and the procedure for research that spans the decisions from broad assumptions to research strategies and detailed methods of data collection and analysis. Creswell identifies three types of designs, namely qualitative, quantitative and mixed methods. The distinction between qualitative and quantitative research is framed in terms of using words (qualitative) rather than numbers (quantitative) and the mixed methods research resides in the middle as it incorporates elements of both qualitative and quantitative approaches (Creswell, 2009:3). The designs are briefly explained below to clarify how I made my decision for a particular research design in the context of the study.

4.4.2.1 Qualitative research

Creswell (2009:4) defines qualitative research as a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. In explaining qualitative research further, Creswell (2009:4-5) points out that the process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. Salkind (2003:310) adds that qualitative research refers to research that produces descriptive data,

peoples' own written or spoken words as well as observable behaviour, and it focuses on the phenomena within the cultural and social context in which the research takes place. Qualitative research is an approach that has its focus on phenomena in natural settings in the real world and it involves studying those phenomena in all their complexity (Leedy & Ormrod, 2010:135).

4.4.2.2 Quantitative research

Quantitative research defined by Creswell (2009:4) and Leedy and Ormrod (2010:94), is a means for testing objective theories by examining the relationship among variables. Variables can be measured on instruments so that the data that is numbered can be analyzed by using statistical procedures. The purpose of quantitative research is to seek explanations and predictions that can be generalized to other persons and places. As asserted by Leedy and Ormrod (2010:94), the intention of quantitative research is to establish, confirm, or validate relationships and to develop generalizations that contribute to existing theories (Leedy & Ormrod, 2010:94).

4.4.2.3 Mixed method research

Creswell (2009:4) defines mixed method research as an approach to inquiry that mixes both qualitative and quantitative research designs with the aim to solve a problem or to gain an in-depth and holistic understanding of a research problem. The mixed method is more than simply collecting and analysing both kinds of data. It involves the use of both approaches in tandem so that the overall strength of a study is greater than qualitative or quantitative research.

Based on the aforementioned information, I decided to use a qualitative research design to obtain data with the purpose of describing and understanding learning style diversity from the participants' points of view. (Leedy & Ormrod 2005:94). A qualitative research design would support the aim of my study, namely to gauge the participants' understanding of learning style diversity, and to explore how they accommodate diverse learning styles during teaching by speaking to them and observing their classroom practice in natural settings.

Within the qualitative research design, I chose a qualitative research strategy for executing the research.

4.4.3 Research strategy

A research strategy is a plan that provides direction for research procedures (Creswell, 2009:11). A research strategy provides a framework for action that serves as a bridge between the research question and the execution or implementation of the research. A research strategy is also a plan that directs the arrangement of conditions for collection and analysis of data (Babbie & Mouton, 1995:83; Blanch & Durrheim 1999:29; Wiersma & Jurs, 2009:233).

According to McMillan and Schumacher (2006:26), qualitative research can be interactive or non-interactive. As I wanted to focus on a lived experience with face-to-face interaction, I chose an interactive, phenomenological strategy to conduct the research.

4.4.3.1 Phenomenological research strategy

According to McMillan & Schumacher (2001:428) and Salkind (2003:215), an interactive strategy is an analytical description of social scenes, shared feelings, beliefs, practices, artefacts, folk knowledge and action. I used a phenomenological strategy to collect data through interacting with participants and observing them in their natural classroom settings to explore how they accommodate diverse learning styles in inclusive Grade 4 Life Orientation classroom settings.

Creswell (2009:13) asserts that a phenomenological research strategy involves an inquiry where the researcher identifies the nature of human experiences about a phenomenon as described by participants in order to understand and interpret the meaning that the participants give to the research phenomenon that is part of their everyday lives (Leedy & Ormrod, 2010:141).

In line with the assumptions of an interpretivist study, the methods used for collecting data were focus group interviews and observations. A detailed discussion of the data collection methods follow in the section below.

4.5 METHODS OF DATA COLLECTION

In order to determine a suitable interview type for the study, I carefully examined the research literature in-depth.

4.5.1 Interviews

An interview, as explained by Merriam (2009:87) and Nieuwenhuis (2007b:87), is a two-way conversation in which questions are asked by an interviewer to a participant in order to collect data and to learn about the ideas, beliefs, views, opinions and behaviours of the participants. Interviews in qualitative research aim at seeing the world through the eyes of the participant, and are valuable sources of information.

According to Nieuwenhuis (2007b:87) and Merriam (2009:89), interviews can be structured or unstructured in nature. They distinguish the following types of interviews.

4.5.1.1 Types of interviews

An unstructured, open-ended interview

According to Nieuwenhuis (2007b:87) and Merriam (2009:89), this type of interview usually happens in the form of a conversation, is more flexible and exploratory in nature with the intention that the researcher explores with the participants her or his views, ideas, beliefs and attitudes about certain events or phenomena. This type of interview is used when the researcher does not know enough about a phenomenon to ask questions and the goal is to gather information from this interview to formulate questions for later interviews. It is primarily used in ethnography, participant observation and in case studies (Merriam, 2009:89).

The semi-structured interview

Semi-structured interviews are commonly used in research projects to corroborate data emerging from other data sources (Nieuwenhuis, 2007b:87). Basically these interviews define the line of inquiry (Nieuwenhuis, 2007b:87), and include a mix of structured and less structured interview questions which are flexible and require specific data from the participants (Merriam, 2009:89). The wording and order of questions is not predetermined and the largest part of the interview is guided by a list of questions or issues to be explored (Merriam, 2009:89). Questions are not rigid and there is no order in which questions are asked. The format allows the researcher to respond to a situation as it comes, to the emerging world of the participant, and to new ideas on the topic (Merriam 2009:90).

Structured interviews

Structured interviews are interviews where the questions are prepared, detailed and developed beforehand (Nieuwenhuis, 2007b:87). The wording and order of questions are predetermined and the interview is in the form of an oral written survey (Merriam, 2009:89). A disadvantage of structured interviews is that they are too rigid; adhere to pre-determined questions that do not allow access to a participant's perspectives and understanding of the world (Merriam, 2009:90).

In addition to the structured or unstructured nature of interviews, interviews can be conducted in a group or one-on-one. In the following sections, I distinguish between focus group interviews and face-to-face interviews.

Focus group interviews

According to Merriam (2009:93), focus group interviews are qualitative methods of collecting data on a topic with a group of people who have knowledge of the topic. Knowledge is socially constructed within the interaction of the group. Nieuwenhuis (2007b:90) asserts that the use of focus group interviews is based on the assumption that group interaction will be productive in widening the range of responses, activating forgotten details

of experiences and releasing inhibitions that may otherwise discourage participants from disclosing information. This type of interview was used in the study and is explained in detail in 4.4.1.2.

Face-to-face interviews

This is an interview between the researcher and the participants. Face-to-face interviews allow the researcher to establish rapport with participants and therefore gain their cooperation (Leedy & Ormrod, 2010:188). High response rates are yielded by these interviews. However, these interviews are time-consuming and expensive if they need interviewees residing in a variety of states, provinces or countries (Leedy & Ormrod, 2010:188).

After analysing the different types of interviews, I decided to make use of structured focus group interviews in the study, because I wanted to gather data from the participants based on specific pre-determined questions in relation to accommodating diverse learning style needs, as identified by the literature. I used group interviews, because I was of the opinion that group interaction would be productive in widening the range of responses, activating forgotten details of experiences and releasing inhibitions that may otherwise discourage participants from disclosing information (Nieuwenhuis, 2007b:90). Furthermore, focus group interviews could promote sharing and comparing of ideas and understanding a variety of experiences (Clarke & Richie quoted by Chaane, 2002:292; Nieuwenhuis, 2007b:90). In order to implement focus group interviews successfully, I had to explore and become acquainted with the theoretical principles that guide the use of this type of interview.

4.5.1.2 Focus group interviews

Definition of focus groups interviews

According to Nieuwenhuis (2007b:90), a focus group interview is a two-way conversation in which the interviewer asks the participants questions to collect data and to learn about the ideas, beliefs, views, opinions and behaviours of the participants in relation to a specific phenomenon. The main aim of my focus group interviews was to obtain rich descriptive data that would help me

to understand the participants' dealing with diverse learning styles in their classrooms (Nieuwenhuis, 2007b:87).

Morgan (1997:6) and Krueger (2003:18) define a focus group as a research technique that gathers data through group interaction and by means of *"a carefully planned discussion designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment"*. Focus group interviews reach into human tendencies where attitudes and perceptions are developed through interaction with other people (Krueger, 2003:26).

In line with the view of Merriam (2009:93), the focus group interviews involved interviews with educators who were knowledgeable on teaching in inclusive classrooms. The data obtained was socially constructed within the interaction of the group (Krueger, 2003:26; Merriam, 2009:93).

The use of focus groups

In line with the guidelines of Krueger (2003:5) and Nieuwenhuis (2007b:91) regarding the more common uses of focus group interviews, I used this type of interview for the following purposes:

- to obtain general background information about the topic learning styles;
- to diagnose the potential for problems related to accommodating learning styles in the learning of Life Orientation;
- to generate impressions about how learning styles are presently accommodated in the Life Orientation classrooms;
- to look for a range of ideas;
- to gain multiple viewpoints;
- to uncover differences in opinion;
- to uncover facts that influence opinion;
- to create lines of communication about accommodating learning styles during the teaching of Life Orientation;
- to probe for clarification and solicit detail.

- to guarantee high face validity due to the clarity of the context and detail of the discussion.
- for sharing and comparing ideas among participants; and
- because a large amount of data could be generated in a short time.

As the literature revealed different approaches to the use of focus groups, I briefly explore these approaches in the section below, and indicate the approach, which I found suitable for my study.

Approaches to the use of focus groups

Greeff (2002:309) identifies three approaches to focus groups:

- the exploratory approach that is often conducted to pilot-test operational aspects of anticipated qualitative research;
- the clinical approach that builds on the assumption that the real causes of behaviour must be understood through the sensitivity and clinical judgment of a trained professional; and
- the phenomenological approach that is used to understand the everyday experience of the participants.

As the size of the focus group plays an important role in data collection, I had to ensure that my choice of participants adhered to the guidelines set out in the literature.

The size and number of focus groups

According to the criteria identified by Greeff (2002:311) and Babbie and Mouton (2002:292-293), I considered the following aspects when I determined the size and number of focus groups that would take part in the study:

- The size of the group usually includes six to ten participants. My groups initially comprised eight participants each. Some of the participants did not honour their interview appointments and therefore the number of

participants in each group varied between five and eight participants each (*cf.* Table 5.1).

- Sufficient participants were selected so that the focus group did not fall flat if some members chose to remain silent. Although some of the participants did not turn up, I received sufficient responses and the data collection was not hampered.
- Smaller groups of four to six people are preferable when the participants have a great deal to share about a topic or have intense or lengthy experiences with a topic of discussion and are easy to manage. My group numbers varied between five and eight participants, which were easy to manage and not challenging in terms of discipline.
- The researcher needs to ensure that information is obtained from each participant. I made sure to give each participant an opportunity to express his/her views on a question, to avoid that certain participants dominated the discussion.
- The researcher must steer clear from friendship pairs or experts and uncooperative participants. I separated educators coming from the same school and mixed them with participants from other schools to ensure that contributions were done individually and that the participants were not influenced by a perception held at a particular school, or afraid to voice a different opinion among colleagues from the same school.
- It is advisable to over-recruit by 20% to compensate for members not showing up. Instead of recruiting the suggested number of six participants per group, I recruited eight participants to compensate for participants who did not turn up. In total, eight of the initial 40 participants who were recruited, did not turn up.
- A number of three to five groups at most are suitable to get adequate data. I formed five groups for this research to ensure that I collected sufficient data for the study.
- Groups must be heterogeneous to be able to separate idiosyncratic and individual characteristics from data. My focus groups were heterogeneous

and comprised males and females, young and old as well as experienced and inexperienced Life Orientation educators.

- Doing only one focus group can severely hinder the results of the study because one will be unable to control for idiosyncratic responses, and one will not be able to tell what impact the group's dynamics had on the data. In order to avoid the aforementioned, I conducted five focus group interviews.

The questions formulated for use in the focus group interviews were based on the criteria below.

Questions for interviews

I carefully formulated and sequenced questions for my interview protocol based on the purpose of the study. Questions were based on reviewed literature and after consultation with my promoter and experts in the field of learning style diversity (Greeff, 2002:314). Questions were structured according to the question types suggested by Patton (in Merriam, 2009:96) to stimulate responses from interviews, which were:

- Experience and behaviour questions, that related to actions and activities in the classroom.
- Opinion and value questions, to establish the participants' beliefs or opinions about accommodating learning style diversity.
- Feeling questions, which "tapped the effective dimension of human life" in relation to their feelings/perceptions about teaching to accommodate diverse learning styles (Merriam, 2009:96).
- Knowledge questions, which elicited a participants' actual factual knowledge about their understanding learning style diversity.
- Background/demographic questions as contained in all interviews that refer to the particular demographics (gender, age, qualification, type of school, teaching experience) of the person being interviewed, as relevant to the study.

The questions can be viewed in the interview protocol, which is attached in Appendix C.

In order to make sure that my interview questions were clear, understandable and valid for the study, I conducted an informal pilot study.

Piloting interviews

According to Esterberg (2002:100), researchers should always try to pre-test their interview guide to guard against what may seem like good questions. Greeff (2002:295) indicates that researchers should build into their proposal a pilot venture in which they buy out their interviewing design with a small number of participants who will not be part of the actual study. A pilot study is the administering of the research on a very limited scale to check whether it will work in practice. Following what Esterberg (2002:100) and Greeff (2002:316) say about piloting/pretesting of interviews, I selected a small sample of eight Life Orientation educators who were not part of the actual study, to test the interview questions for clarity and suitability before the actual study was conducted. Two subject specialist who were knowledgeable in the field of study (inclusive education and learning style diversity) as well as my promoter determined the content validity of the interview questions in terms of their relevance for a study that focused on the accommodation of diverse learning style needs. The outcome of the pilot study assisted me in reformulating some of the interview questions to enhance their clarity.

As I am a novice researcher, I had to become acquainted with the principles for enhancing the effectiveness of the interaction between the interviewer and the participant before conducting the focus group interviews.

Interviewer and participant interaction

In support of Merriam (2009:107), I ensured that I respected the participants; I was non-judgemental and non-threatening from the beginning, as well as kind, listening and sympathetic. Participants expressed their thoughts, feelings, and opinions freely and offered their perspectives on the study topic without me criticizing their responses or indicating that their responses were incorrect.

Participants were consulted in setting convenient times and dates for the focus group interviews. Furthermore, the venues for the focus group interviews were identified as close as possible to the participants, so that they did not have lengthy distances to travel.

In order to formulate good interview questions, I examined the criteria for asking good questions, as evident in the research literature.

Criteria for asking questions

I adhered to the following criteria for asking good questions in order to obtain valid data, as suggested by Nieuwenhuis (2007b:88):

- The participants who took part in the study were educators who were knowledgeable on what teaching in inclusive classrooms entail, and were qualified to teach Life Orientation to Grade 4 learners in the Intermediate Phase (*cf.* Table 5.6).
- The aim of the interview was clearly explained to the participants. Educators were informed that the researcher required information on their understanding of diverse learning style needs, and how they accommodate diverse learning style needs in their inclusive classroom settings. Participants were clearly informed that participation in the study is not compulsory and that they are allowed to withdraw at any time if they so wish.
- Questions requiring “yes” or “no” answers and leading questions were avoided. The interviews lasted for a maximum time of forty-five minutes to one hour each. The interview was practised with a colleague before starting the exercise to determine time frames and uncertainties that could occur during the actual interview.
- I discussed the ground rules with the interviewees before the interviews commenced. The ground rules *inter alia* included the following: dominance in a group was not allowed and participants were requested to listen to questions carefully before giving their answers. I ensured that I understood what participants said, did not become judgemental and never criticized

any participant. There were no arguments or disagreements among the participants.

- I observed with silence the participant's non-verbal communication, maintained eye contact, and kept an upright posture at all times.
- I used the following three probing strategies to obtain the maximum amount of data and to verify whether what I heard was actually what the person meant:
    - detail-orientated probes to understand which teaching strategies were necessary to accommodate the various learning style needs;
    - elaboration probing, to get a fuller picture of how learning style needs are accommodated in the Life Orientation classroom; and
    - clarification probes, to check if I understood accurately what had been said (Nieuwenhuis, 2007b:88-89).

On request of the participants, the interview discussions were conducted in English. All the interviews were tape-recorded to ensure complete capturing of everything that the participants said (Merriam, 2009:109).

Field notes

I captured the information regarding the whole interview, proceedings and non-verbal behaviour like gestures between group members, eye contact, posture and fidgeting during discussions (Merriam, 2009:110). Striking themes were also recorded. The seating arrangements and speaking order were noted and the data obtained from the field notes were integrated with the data obtained from the interviews and the observations to identify the trends and patterns (Greeff, 2002:317-318).

My decision to use focus group interviews was based on the following advantages and disadvantages noted in the literature.

I took cognizance of the fact that the use of focus group interviews also holds a number of disadvantages.

- They require a highly skilled researcher.
- Groups are often difficult to assemble.
- Individual responses are not independent of one another, especially if friends are grouped together
- Because the group is hand-selected, the results may not be representative of the general population.
- The focus group samples are typically small and may not be representative.
- All participants must be able to gather in the same place at the same time, which is particularly difficult if the potential participants live in geographically distant areas.
- The more outspoken individuals and the difficulty of assessing the viewpoints of less assertive participants may bias the information collected through group processes.

I put the following measures in place to accommodate some of the mentioned limitations mentioned with the use of focus group interviews. My focus groups were composed in such a manner that it was easy for the participants to get together. I purposefully requested responses from all participants to avoid domination by certain participants. Group participants were representative of different schools, to ensure that participants could provide individualised and independent responses.

In the following section, I clarify how the participants for my study were selected.

4.5.1.3 Research participants

The population for this study comprised all Grade 4 Life Orientation educators in South Africa. It was not possible to do research with the entire population; therefore, a study population was identified. As the researcher works as a facilitator for Life Orientation (Intermediate Phase) in the Sedibeng East District (D7) of the Gauteng Department of Education, the neighbouring D8

District (Sedibeng West) was conveniently chosen (Leedy & Ormrod, 2005:206) to conduct the research. For the purpose of the study, all the primary schools in the Sedibeng West district (D8) of the Gauteng Department of Education formed part of the study population. Due to time and financial constraints, two clusters of primary schools in the D8 District were approached to take part in the study. During my visits to schools as facilitator for Intermediate Phase Life Orientation in the D7 District of the Gauteng Department of Education, I have particularly noticed that the educators who teach in Township schools experience problems related to accommodating diversity in their classrooms. I therefore, purposively (Leedy & Ormrod, 2005:206), decided to focus my research on Grade 4 Life Orientation classrooms in Township schools. In total, 20 primary schools in the identified two clusters were willing to become involved in the research.

Purposive sampling is a non-probability sampling strategy with which a researcher wants to obtain the richest possible source of information (Nieuwenhuis, 2007b:79). Nieuwenhuis (2007b:79) indicates that purposive sampling implies that participants are selected because of some defining characteristic that makes them the holders of the data needed for the study. In the context of the study, the participants had to be Grade 4 Life Orientation educators who teach in inclusive classrooms in Township schools. Available statistics at the District Office indicated that approximately two educators teach Life Orientation in Grade 4 at a school. After approaching the 40 educators and explaining the purpose of the research to them, they indicted their willingness to take part in the study. The sample comprised a heterogeneous group of experienced and inexperienced male and female educators at Township schools (*cf*. Tables 5.1- 5.8).

Interview participants

For the purpose of the interviews, all 40 educators who were approached to take part in the study were grouped into five focus groups with eight participants each. The actual interviews were done with only 32 participants, as eight participants did not honour their interview appointments. The number of the participants who were interviewed appears to be more or less in line

with what Leedy and Ormrod (2005:139) indicate, namely that it is advisable to use between 5 and 25 participants for a phenomenological study.

Participants for the observations

One willing participant in each of the focus groups was selected to take part in three structured observation sessions. This implied that five educators were exposed to three observation sessions of 30 minutes each.

Permission was obtained from the Department of Education and the school principals to engage educators in the study. I thereafter visited the identified schools and had an information session regarding the purpose of the study with the participants in order to obtain their assent to become involved in the study. Participants who took part in the study completed letters of consent with a full understanding of the purpose of the interviews explained to them before the actual interviews were conducted. Two weeks before the actual focus group interviews, I contacted the participants to arrange with them the interview dates, times and locations. One week before the interviews, the participants received confirmation letters from me indicating the date, time and venue for interviews. The day before and on the day of the interview session, I made a telephonic follow-up to each participant (Greeff, 2002:311). On the day of the interviews, I provided the participants with refreshments at my expense.

4.5.1.4 Data analysis procedure for focus group interviews

The data was analysed using deductive and inductive approaches. Deductive analysis implies that a-priori codes that guided the data analysis were identified before examining the data (Nieuwenhuis, 2007c:107). These codes were derived from the literature dealing with the topic on learning style diversity (Greeff, 2002:318; Nieuwenhuis, 2007b:99). According to Thomas (2003a:2), the inductive data analysis approach is a systematic procedure for analysing qualitative data where the data analysis is guided by specific objectives. The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent

in raw data, without restraints imposed by structured methodologies (Creswell, 2009:183-190).

I followed the following steps indicated by Creswell (2009:183-190) to analyse and interpret data:

Step 1: Organize and prepare the data for analysis

I transcribed the interviews, scanned materials, and typed field notes. The verbatim transcripts of the interviews are attached in Appendix E.

Step 2: Read through all data

I obtained a general sense of the information and reflected on its overall meaning as to what general ideas participants were expressing. I established in which tone the ideas were communicated and tried to obtain an impression of the overall depth, credibility and the use of the information.

Step 3: Analysis of data

I then started analysing the data with a coding process. I organized the material into segments on the verbatim transcripts, before labelling the information.

Step 4: Coding process

The coding or labelling process starts with open coding, which is a process that identifies the segments in the words of the participants that answer the question posed. Open coding is followed by axial coding, which can be defined as a set of procedures whereby data is put back together in new ways after open coding by making connections between categories.

As part of the coding process, I followed the eight steps for a systematic analysis of textual data as indicated by Creswell (2009:186).

1. I read all transcriptions carefully, to get the sense of the whole and wrote down some ideas as they came to mind.

2. I went through the interviews one by one and asked myself what it was about. Then I wrote thoughts in the column created for the open coding.

3. After going through all interviews, I made a list of all topics. Similar topics were clustered together.

4. I took the list and the data, abbreviated the topics as axial codes and wrote the axial codes next to the appropriate segments of the text (*cf.* Appendix E).

5. I re-coded existing data where necessary.

The data were analysed to accommodate the following:

- Topics that the readers would expect to find, based on the literature and common sense.
- Topics that are surprising and that were not anticipated at the beginning of the study.
- Topics that are unique, and of conceptual interest to the readers.
- Topics that accommodate a large theoretical perspective in the research.

Step 5: Description

I used the axial coding to generate a description of themes for interpretation (*cf.* Appendix F).

Step 6: Presentation and description and themes

A narrative passage was written to convey the findings of the data analysis.

Step 7: Interpretation

I made meaning of the data, asking what lessons were learned. I looked for meaning derived from a comparison of the interview findings with information gleaned from the literature (Creswell, 2009:189). Finally, I structured visual representations to summarize the findings obtained for each of the interview questions.

According to Lincoln and Guba (in Babbie & Mouton, 2002:277), the crucial criterion or principle of good qualitative research is found in the notion of trustworthiness. In the section below, I explain how I adhered to criteria for trustworthiness in the context of the research.

4.5.1.5 Trustworthiness of focus group interview data

Trustworthiness was guaranteed by adhering to criteria for credibility, transferability, dependability and confirmability as proposed by Lincoln and Guba (1985:301-316).

Credibility

Credibility refers to the compatibility of research findings with reality (Merriam, 2009:213). I adhered to the following procedures suggested by Lincoln and Guba (1985:301-316) in order to enhance the credibility of my research.

- Prolonged engagement: This means staying in the field until data saturation occurs. I made sure that I obtained data saturation with the interviews, and also conducted three observations with five participants to obtain rich data.
- Referential adequacy: I recorded the responses of my participants to ensure that no data got lost, and included the verbatim transcripts and coding of the interview responses in Appendix F to provide evidence of how I identified the central themes in the data that guided the formulation of my findings and conclusions.
- Member checks: I contacted the participants who took part in the study to verify my verbatim transcripts of the interview data in order to make sure that I captured the correct words and meanings. My interpretations were also verified with the participants in order to establish that my interpretations were in line with what they said during the interviews.
- Peer debriefing: Debriefing was done with a colleague who was not part of the study, but had a general understanding of the nature of the study. We reviewed my perceptions, insights and analyses to assist me in making trustworthy conclusions.

Transferability

According to Lincoln and Guba (quoted by Babbie & Mouton, 2002:277), a qualitative study cannot be regarded credible unless it is also transferable. Transferability refers to the extent to which the findings can be applied in other contexts or with other participants. I guaranteed transferability according to the following criteria identified by Babbie and Mouton (2002:277).

- Thick description. My findings were based on more than one source of data collection, namely interviews and observations, which contributed to a rich database.
- Transferability in a qualitative study depends on similarities between sending and receiving contexts. I collected sufficient detailed descriptive data in relation to the context of the research in order to allow judgments about transferability to be made by the reader (*cf.* Tables 5.1 - 5.8, Tables 5.12 – 5.16). I used purposive sampling (Babbie & Mouton, 2002:277) in order to obtain specific information related to a specific group of participants and described some background detail, which might allow for some degree of transferability to other inclusive Grade 4 Life Orientation classroom contexts having similar background detail.

Dependability

It is important for a qualitative researcher to provide evidence that findings would be similar if the research were to be repeated with the same participants in the same context (Babbie & Mouton, 2002:278). I adhered to the following processes according to Lincoln and Guba (1985:316-318), to enhance the dependability of my study.

- I made use of an inquiry audit, which implied that my promoter examined my interview transcripts, coding and field notes as well as my interpretations for acceptability.
- To ensure dependability I checked with the interviewees to find out if what I had captured was what they mentioned. The participants agreed with the observations I made.

Confirmability

Confirmability refers to the degree to which the findings are the product of the focus of the inquiry and not of the biases of the researcher (Babbie & Mouton, 2002:278). Lincoln and Guba (1985:318) refer to confirmability as an adequate trail that should be left to enable somebody to trace the conclusions, interpretations, and recommendations made. I utilized an audit trail to determine if the conclusions, interpretations and recommendations that I formulated were supported by my interview data (*cf.* Appendix E). My study leader reviewed my raw data, my field notes, summaries and themes that were developed, as well as my conclusions to ensure that I focused on the words of the participants and not my own interpretations. I also made use of an independent coder to verify the identification of codes, axial codes and themes.

Furthermore, the interview data was crystallized and checked against the findings from the observation data as well as the literature review to obtain a deep understanding (Nieuwenhuis, 2007a:81; Nieuwenhuis, 2007b:113; Babbie & Mouton, 2002:277). According to McMillan and Schumacher (2001:463) and Nieuwenhuis (2007a:81), crystallization is about recognizing that our world has *"far more than three sides".* Richardson (2000:934) refers to crystallization as the concept that enables us to shift from seeing something as a rigid, fixed, two-dimensional object towards the idea of a crystal, which permits for an infinite variety of shapes, substances, dimensions and angles. Crystallization seeks to open the analyst to maximum experiences within the analytic style (McMillan & Schumacher, 2001:463).

As the researcher in qualitative research is subjectively involved in the data collection process, caution has to be taken that the data collection process is not compromised in any way. I therefore had to consider my role as researcher carefully.

4.5.1.6 The role of the researcher in qualitative research

According to Creswell (2009:177), the researcher is a key instrument in the process of data generation and data interpretation. I was typically involved in

a sustained and intensive experience with participants. The following range of strategic, ethical and personal issues was taken into consideration:

Historical, social, cultural experiences

The study was conducted *inter alia* with participants who teach in previously disadvantaged Township schools. I am from the same historical, social and cultural background as many of the participants, and therefore understand the challenges that they face during teaching. This assisted me to collect data in an easy way, as the participants could feel free to communicate with me and did not have to feel threatened by my presence.

Status (race/gender/socioeconomic)

I am a black female person who resides in another province other than that of the participants, but work as a district official for the Department of Education in the District where they teach. As part of conducting honest research, I made the participants aware of my position. This might have posed a socioeconomic and status threat to the participants that could have compromised the data collection. The participants might have been scared to share their responses with the thought that I being a district official might be more knowledgeable on the topic and they did not want to be embarrassed when responding. Furthermore, the participants knew that I was a Life Orientation facilitator, which could have posed a threat to them in terms of wondering what the implications might be for their teaching positions if they expose their classroom practice to me. I ensured the participants that the findings of the research would have no impact on their teaching positions, but was important as I wished to assist them in dealing with the challenges they experience in accommodating diverse learners in inclusive classrooms.

Assumptions

In conducting the study, I had to state my assumptions regarding the research that I was going to undertake upfront to make sure that my assumptions did not cloud my interpretations. I assumed that many educators were going to say that they did implement learning styles in their classrooms, while in fact

they did not. This assumption was based on my experiences with Life Orientation educators in the District where I work; I have noted that they have difficulty in accommodating diverse learning style needs in their classrooms. I had to be aware of this so that my assumption would not cloud my judgment or make me overlook responses that did not support my assumptions and previous experiences.

Personal connection to site/participants

I did not have any personal connection to the sites and participants. This implied that participants could provide information freely and not hide anything. The study was conducted with participants from a different District than the District in which I work. If a researcher has a connection with the participants, this might influence the research study negatively; in that participants might want to impress the researcher and give answers they think the researcher wants, and not answers that reflect reality. A connection with participants could have encouraged compromise in data collection.

Sensitive ethical issues

The study did not focus on sensitive ethical issues, and educators were not identified by their real names, to protect their identity. Numbers were used to identify the different participants. The names of the schools where participants came from were not used, to protect their privacy and to guarantee confidentiality.

In the following section, I explore the use of observations in the context of the study.

4.5.2 Observations

According to Nieuwenhuis (2007b:83), *"observation is the systematic process of recording the behavioural patterns of participants, objects and occurrences without necessarily questioning or communicating with them".* Nieuwenhuis (2007b:83) further simplifies observation as an everyday activity whereby all senses and intuition are used, to gather data. Cohen *et al.* (2007:421) confirm

what Nieuwenhuis (2007b:83) indicates, namely that observations are a powerful research tool for gaining insight into situations.

Merriam (2009:117) mentions that, in comparison with interviews, observations take place in the setting where the phenomenon of interest naturally occurs. In this study, the use of observations represented a first-hand encounter with the research phenomenon, namely to observe how educators accommodate diverse learning style needs through the choice of teaching methods and strategies, learning activities and assessment methods and strategies employed during teaching and learning, in real-life settings (Life Orientation classrooms) (Merriam, 2009:117).

4.5.2.1 The purpose of using observation in research

According to Cohen *et al.* (2007:398), the purpose of using observation in research is that it offers an investigator the opportunity to gather authentic data from naturally occurring social situations. This ensures that the researcher looks directly at what is taking place in the situation, rather than relying on second-hand accounts. I observed participants while they were teaching in their natural setting in order to collect and gather data in their natural classroom settings.

4.5.2.2 Types of observation

Cohen *et al.* (2007:404), Nieuwenhuis, (2007b:84-85) and Merriam (2009:124-125) identify the following four types of observations used in qualitative research:

According to Cohen *et al.* (2007:404), in **participant as observer** observation, the researcher stays with participants for a substantial period to eliminate reactivity effects, records what takes place, while taking a role in the situation. The researcher becomes a participant in the situation being observed and may intervene in the dynamics of the situation and even try to alter it. Babbie and Mouton (2002: 293) point out that it is difficult to become a participant during observation, as one is faced with a challenge of

simultaneously being one of the members of the group, and observing everyone else from the researcher's point of view.

The researcher might participate in some particular activities in the situation, like sharing the supervisions, participating in school life in the school situation. The researcher, while staying in the situation over a long period, is able to see how events evolve over time, catching the dynamics of situations, the people, personalities, contexts, resources and roles (Cohen *et al.,* 2007:405). Morrison as quoted by Cohen *et al.* (2007:405), mentions that being immersed in a particular context over time, reveals a more holistic view to gather interrelationships of factors, to generate thick descriptions, processes and interaction, leading to accurate explanation. In the course of participation, observation data collected is strong on reality.

A **complete observer** occupies a non-participant observer position looking at the situation from a distance (Nieuwenhuis, 2007b:85). It is the least obtrusive form of observation, but the researcher does not become immersed in the situation and might not really understand what is observed.

As a **complete participant**, a researcher becomes completely immersed in the research setting, without the participants knowing that they are being observed (Nieuwenhuis, 2007b:85).

In the context of the study, I decided that the co-observer and I would use the role as complete observers, as we only watched what happened in the classrooms from a distance, without being involved and not influencing the dynamics of the classroom setting (Nieuwenhuis, 2007b:85).

4.5.2.3 The focus of observations: what to observe

In line with the views of LeCompte and Preissle (quoted by Cohen *et al.,* 2007:405-407), Denzin (quoted by Babbie & Mouton, 2002:293) and Merriam (2009:119-123), I concentrated on the following aspects during the observations:

- Exterior and physical signs of the classroom settings.

- Participants and their roles during teaching, learning and assessment.
- Positioning of educators and seating of learners.
- Activities and interactions (the activities that are taking place, sequence of activities, interaction of people, norms and rules of the activity).
- Subtle factors (informal and unplanned activities, symbols and connotations, non-verbal communication, physical space).
- Conversations and discussions: who is talking, listening an making decisions (*cf*. Tables 5.12 - 5.16).

4.5.2.4 The structure of the observation schedule

I drew up an observation schedule where I observed five educators in their classrooms for three sessions of 30 minutes each, where I looked for patterns of learning styles, teaching methods, learning activities and the assessment approaches utilized in the classroom. With these observations, I aimed to collect information that would indicate to me how the educators accommodate diverse learning styles. Before the observations were conducted, I identified predetermined categories of behaviour that I wanted to observe. These categories were distilled from the literature and were developed into a framework according to which learning styles, teaching methods, learning activities and assessment approaches utilized in the classroom, were observed (*cf*. Appendix D). Although the observations were qualitative in nature, I in advance specified categories that had to be observed in order to avoid certain aspects being overlooked.

4.5.2.5 Arranging observations with the participants

In order to make sure that the observations yielded reliable data, I followed the suggestions made by Leedy and Ormrod (2005:145) and Nieuwenhuis (2007b:84-87):

- Consent was obtained from participants and the purpose of the observation was explained.
- I remained quiet and inconspicuous during the observation.

- Proper field notes were taken of what was heard and said and used in conjunction with the running recording of the observations related to the classroom activities.
- Pre-determined categories to guide the observation were determined to avoid selective observation and a complete subjective stance being taken during the observations.
- Both verbal and non-verbal behaviour was recorded.

The first observation was announced to participants, and observations two and three were unannounced. This arrangement was made with the participants and the school principals prior to the observations to avoid participants' preparing in advance for their teaching because they knew they were going to be observed. If the aforementioned happened, I might not have obtained a true reflection of what actually happens in the classrooms. The first observation was announced to set participants' minds at ease and avoid the observations becoming threatening to them.

4.5.2.6 Recording of observations

Recording of the data is the most important part of observation (Nieuwenhuis, 2007b:85-86). Merriam (2009:128) mentions that what is written down or mechanically recorded becomes the raw data from which a study's findings eventually emerge. Nieuwenhuis (2007b:85) further mentions that recording of the observations can take on one of the following forms:

- Anecdotal records: these are short descriptions of basic actions observed, capturing key phrases or words, and should be objective with no self-reflective notes.
- Running records: these are more detailed, continuous or sequential accounts of what is observed. They focus both on actions and situations and try to describe the action in the context in which it occurred
- Structured observations: in this type of observation, researchers identify predetermined categories of behaviour that they would like to observe,

which are distilled from the literature and are developed into checklists or rating systems to record and score predetermined actions or behaviours.

I used structured criteria to identify predetermined criteria according to which the observations were made, but wrote qualitative running records about each of the criteria (*cf.* Appendix D). Cohen *et al.* (2007:407) explain that the introduction of some systematization into observations is intended in order to increase their reliability.

4.5.2.7 Reflective notes

Merriam (2009:131) indicates reflection as an important component when compiling field notes of that, which is captured in the observer commentary. I noted reflective comments according to my initial feelings, reactions, speculations and initial interpretations. These comments were over and above factual description of what was going on. They were based on the thoughts about the setting, people and activities. The role of the reflection is to give impressions over and above factual descriptions of what is going on; they are comments on and thoughts about the setting, people, and activities (Merriam, 2009:131). The co-observer and I captured these reflections immediately after the observation sessions and integrated them during the data analysis (*cf.* 5.4.1 – 5.4.4) to give clarity on what might have happened or what might be the cause of certain actions, which we observed.

4.5.2.8 Advantages and disadvantages of observations

I took cognizance of the advantages and disadvantages that observations hold for data collection.

Kelleher (quoted by Babbie & Mouton, 2002:295) identified the following advantages of observation: observations force the observer to familiarize himself/herself with the phenomena to observe and allow unnoticed or ignored aspects to be seen. Babbie and Mouton (2002:295) argue that observing people's actions probably tell more than their verbal accounts.

A disadvantage of observations is that the researcher (especially a novice researcher) might not always know what to look for at the beginning, and may alter what people say and do and how events unfold (Leedy & Ormrod, 2005:145). I tried to avoid that these disadvantages compromised the collection of data by constructing an observation schedule with specific criteria to guide the observation and had the assistance of a colleague in the field who acted as a co-observer, which provided a way of checking whether the observations made were reliable and valid.

4.5.2.9 Participants for the observation

Only educators who were willing to be observed, were observed. One willing participant from each of the five focus groups agreed to take part in three observation sessions.

4.5.2.10 Data analysis for the observations

In analysing data for observations, I reviewed data trends, major ideas and important elements that related to answering my research questions. Codes that organized data were formed. Sub-categories were developed and observation data were crystallized and checked against the findings obtained from the interviews and the literature review (Nieuwenhuis, 2007b:86).

4.5.2.11 Trustworthiness of the data analysis for the observation

To ensure the trustworthiness of the observations, I verified my understanding of what I had observed with the observation records of the co-observer. Summaries of the observations were discussed with participants to verify whether what had been concluded about the observations was a true reflection of what happened in the classroom. The participants agreed with what was observed, which enhanced the trustworthiness of our observations. I further crystallized from the observations information that was compared with what emerged from the focus group interviews (Henning *et al.,* 2004:93; Nieuwenhuis, 2007b:86).

The co-observer and I strove to be as objective as possible in assessing the behaviour being studied. To maintain such objectivity, we employed the following strategies:

- We defined the behaviour being studied in a precise, concrete manner so that the behaviour was easily recognized when it occurred. This prevented that the co-observer and I paid selective attention to certain aspects of the classroom teaching and learning, and ignoring others.

- The co-observer and I observed the same behaviours independently without knowledge of one another's findings.

- I trained the co-observer so that we followed the same criteria when observing the behaviour of the research participants.

Furthermore, I adhered to the following guidelines indicated by Cohen *et al.* (2007:410-411) to enhance the trustworthiness of the observations.

- The co-observer and I jointly decided in advance, what would count as valid evidence for a judgment to be made, which enhanced the **credibility** of the study.

- The co-observer and I did not know any of the educators who were observed which enabled us to distance ourselves from the educators and the context of the situation and to avoid the risk of being biased.

- The co-observer and I compared our findings before making final conclusions which enhanced the **dependability** and **confirmability** of the study.

As indicated by Cohen *et al.* (2007:400) the observation schedule was pilot tested in a Grade 4 Life Orientation classroom that was not part of the actual observation study. The pilot study assisted in establishing what would count as evidence for a specific behaviour.

4.5.2.12 Triangulation

In the context of the study, I made use of triangulation to enhance the validity of my research findings. The use of two or more methods of data collection is a powerful way of demonstrating concurrent validity in qualitative research (Cohen *et al.,* 2007:140-141). I made use of methodological triangulation and investigator triangulation. **Methodological triangulation** refers to the use of different methods of data collection to study a particular phenomenon, and **investigator triangulation** depends on the use of more than one observer to collect data independently (Cohen *et al.,* 2007:142). In this regard, Maree and Van der Westhuizen (2007:40) also speak of **crystallisation**. Crystallisation refers to the practice of validating results by using multiple methods of data collection and analysis to enable the researcher to consider multiple and conflicting voices and differing interpretations (Maree & Van der Westhuizen, 2007:40).

All research involves careful thought about how ethical principles will be adhered to in order to protect the research participants. In the following section, I elaborate on how I complied with ethical principles in my research.

4.6 ETHICAL CONSIDERATIONS

I adhered to ethical principles in order to protect the research participants, to develop their trust in me as the researcher, to promote the integrity of the research, and guard against misconduct and impropriety that might reflect on the institutions of the participants. Punch (in Creswell 2009:87) points out that ethical issues arise in discussions about codes of professional conduct for researchers and in commentaries about ethical dilemmas and their potential solutions. I adhered to the following ethical principles according to Creswell (2009:88-91).

4.6.1 Ethical issues in the research problem

I identified a research problem that would benefit the participants who took part in the study and would be meaningful to other educators as well. The study would benefit the participants as well as other Life Orientation educators

by giving them insight into the accommodation of learning style needs in inclusive Grade 4 Life Orientation classroom settings (Creswell, 2009:88-91).

4.6.2 Ethical issues in the purpose and questions

In developing the purpose statement and questions for the study, I honestly conveyed to the participants that the true purpose of the study was to assist educators on how to accommodate diverse learning style needs in their inclusive Grade 4 Life Orientation classrooms, and that no sponsorship was involved (Creswell, 2009: 88-91). This was done in order to ensure that participants do not get confused or misunderstand their involvement in the research. Before my study commenced, I explained the purpose of the study to all the participants, provided the reasons why and how they were selected and what their involvement would entail, in order to obtain their assent to take part in the study.

4.6.3 Ethical issues in data collection

Before the research commenced, I obtained ethical clearance from the North-West University to conduct the research (*cf*. Appendix G), and requested permission from the Gauteng Department of Education and the relevant school principals to conduct the research. In collaboration with my promoter, I developed an informed consent form for participants to sign before engaging in the research. The consent form indicated the potential benefits of the study, the type of involvement, guaranteeing confidentiality, ensuring that participants can withdraw at any time, as well as contact details of the researcher, should questions arise (*cf.* Appendix B). Permission to continue with the research was also granted by the Gauteng Department of Education (*cf.* Appendix A).

Participants were assured that they would remain anonymous throughout the research. However, they were made aware of the fact that taking part in a focus group interview would make them and their views known to the other research participants. During data collection, names of participants were omitted and numbers were allocated to them as a form of protecting identity. The observations took place during teaching and learning, but prior

arrangements were made so as not to inconvenience the educator and learners or to interfere with teaching time. In addition, the focus group interviews were not conducted during school hours, to avoid interfering with teaching and learning time (Creswell, 2009:89).

4.6.4 Ethical issues in data analysis and interpretation

To uphold the anonymity of individuals I used numbers to protect identities. In line with university regulations, the data will be kept for a period of seven years to avoid the data falling into the hands of researchers who might misappropriate it. In the interpretation of data, I used participant checks to ensure that data interpretation provided an accurate account of the information gathered during the research (Creswell, 2009:91). I also agreed to make the results of the study available to the participants once the study has been completed and examined (Creswell, 2009:91).

4.6.5 Ethical issues in writing and disseminating the research

In reporting the findings of my research, I did not make use of words or language that was biased against the participants based on gender, school, culture, age or experience (Creswell, 2009**:**92). I also avoided falsifying or inventing findings, as Creswell (2009:92) regards it as scientific misconduct. My research findings are based on sound data and findings, obtained from the focus group interviews and the observations.

4.7 CHAPTER SUMMARY

This chapter outlined the empirical research design. The main purpose was to provide the reader with a clear frame of reference concerning the procedures that the researcher followed in conducting the research. The research was conducted within an interpretivist paradigm (*cf.* 4.2.3) using a qualitative approach (*cf.* 4.3.2.2) with a phenomenological research strategy (*cf.* 4.3.3.1). Data was collected by means of focus group interviews (*cf.* 4.4.1) and observations (*cf.* 4.4.2), with a convenient and purposefully selected sample

(*cf.* 4.4.1.3, 4.4.2.9) of 40 Grade 4 Life Orientation educators in the Sedibeng West District (D8) of the Gauteng Department of Education. Data interpretation was done, by using inductive and deductive content analyses (*cf.* 4.4.1.4, 4.4.2.10). The research complied with ethical principles, and criteria to enhance credibility, transferability, confirmability and dependability were adhered to in order to enhance the trustworthiness of the research findings (*cf.* 4.5, 4.4.1.5, 4.4.2.11).

The next chapter, Chapter 5, focuses on the analysis and interpretation of the research data.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter focuses on the data analysis based on the responses obtained for the focus group interviews, as well as the data collected through the observations. The purpose of the interviews was to probe educators' understanding of diverse learning styles and to explore their perceptions of how they accommodate diverse learning styles during teaching in inclusive Life Orientation classroom settings. Observations were used to observe the instructional practices of the educators in order to find out how they accommodate diverse learning styles in their Life Orientation classrooms. Observations were used to corroborate the findings that resulted from the interviews.

The chapter unfolds as follows:

- Biographic information of the participants
- Data analysis of the focus group interviews
- Data analysis of the observations
- Triangulation of interview and observation data

The interview schedule comprised four major questions with sub-questions, which were related to the literature review (*cf.* Annexure C). The questions were phrased in such a manner as to not lead participants to answers. The different learning style needs as explicated in the literature, were not mentioned explicitly during the interview sessions, as it was important to establish whether the educators knew the various learning styles, without being made aware of them.

Annexure C provides the verbatim transcripts of the interview responses. The exact words said by participants, including grammatical errors, were kept to provide a true reflection of what was said. Themes that emerged from different

interview responses for each question was dealt with separately (*cf*. Appendix F). The themes were identified on the bases of the frequency with which the research participants referred to certain issues. In the sections related to the discussion of the themes that emanated from the interview data, reference is made to Appendix C and the row numbers in the interview transcripts to substantiate and motivate the selection of a particular theme, for example, C224.

In the following section, I summarise the biographical information of the participants in table form. The purpose of providing information about the participants, who took part in the study, is to allow for possible judgements about transferability to other inclusive Grade 4 Life Orientation contexts having similar background detail (*cf.* 5.2, Table 5.12 - 5.16).

5.2 BIOGRAPHIC INFORMATION OF THE PARTICIPANTS

Table 5.1 reports on the gender of the research participants.

Table 5.1: Gender of the participants

FOCUS GROUP	Male	Female
ONE	2	3
TWO	2	3
THREE	2	6
FOUR	2	4
FIVE	3	5
N	11	21

Table 5.1 indicates that more female (n = 21) than male educators (n = 11) took part in the study.

Table 5.2 reveals the various age groups of the research participants.

Table 5.2: Age of the participants

FOCUS GROUP	25 – 35	36 – 45	46 - 55	56 - above
ONE		2	3	
TWO		1	2	2
THREE	2	3	3	
FOUR	1	2	3	
FIVE	3	3	2	
N	6	11	13	2

As reflected in Table 5.2, the majority of the participants were older educators in the age group of 46-55, (n = 13). Many of the participants (n = 11), were in the age group 36-45 years of age.

Table 5.3 reflects the teaching experience of the research participants.

Table 5.3: Teaching experience in education (number of years in teaching)

FOCUS GROUP	1- 5	6 – 10	11-15	16-20	21-25	26–30	31 +
ONE		1	1	2	1		
TWO				1	2	2	
THREE	1	3		2	2		
FOUR			2	2		2	
FIVE		2	3		2	1	
N	1	6	6	7	7	5	

Based on the data in Table 5.3, the majority of the participants were experienced educators with more than 15 years of teaching experience, (n = 19).

In Table 5.4, attention is paid to the teaching experience of the participants in the Intermediate Phase.

Table 5.4: Teaching experience in the GET Phase: (number of years in the Phase)

FOCUS GROUP	1- 3	4 – 6	7 -10	11 - 15	16 - 20	21+
ONE	2	2	1			
TWO	2	2			1	
THREE	3		2		2	1
FOUR		1	1	1	2	1
FIVE	3	1	2	1		1
N	10	6	6	2	5	3

According to Table 5.4, the group of participants comprised a number of experienced educators with more than ten years of teaching experience in the Intermediate Phase (n = 10), and a group of participants with less than ten years of teaching experience, (n = 22). Of the less experienced group, ten educators had only between one and three years teaching experience.

Table 5.5 reports on the teaching experience of the participants in Grade 4.

Table 5.5: Teaching experience in the grade: (number of years teaching Grade 4 learners)

FOCUS GROUP	1 - 3	4 - 6	7 -10	11 - 15	16 - 20	21+
ONE	2	2	1			
TWO	3		1	1		
THREE	4	2	1	1		
FOUR	1	1	2		2	
FIVE	2	2	1	2	1	
N	12	7	6	4	3	

Table 5.5 indicates that a number of educators, (n = 12), only have between one and three years' experience in teaching Grade 4 learners. Furthermore,

some of the educators (n = 13) have between 7 and 20 years of experience in teaching at Grade 4 level.

Table 5.6 reveals the teaching experience of the participants in Life Orientation at Grade 4 level.

Table 5.6: Teaching experience in Life Orientation Grade 4

FOCUS GROUP	1- 2	3 – 4	5- 6	6 - 7	8 - 9
ONE	1	2	1	1	
TWO	3	1		1	
THREE	3	1	3	1	
FOUR	3	2	1		
FIVE	2	3	3		
N	12	9	8	3	

Table 5.5 reflects that many of the educators do not have a lot of experience in teaching Grade 4 Life Orientation. The majority of the educators, (n = 12), only have between one and two years' experience in teaching Life Orientation at Grade 4 level.

The position of the participants at their respective schools is the focus of Table 5.7.

Table 5.7: Position of participants

FOCUS GROUP	Principal	Deputy Principal	HOD	Educator
ONE	1			4
TWO	1		1	3
THREE			1	7
FOUR			1	5
FIVE				8
N	2		3	27

As indicated in Table 5.7, the majority of the educators who took part in the study, were post level 1 educators, (n = 27).

Table 5.8 reveals the qualifications of the participants.

Table 5.8: Qualification of participants

FOCUS GROUP	Four-year education diploma	Three-year diploma	Two-year diploma	B-Degree plus diploma	Honours
ONE	2	2			1
TWO	1	2	1	1	
THREE	3	3		1	1
FOUR	3	3			
FIVE	5	2			1
N	14	12	1	2	3

Based on the data in Table 5.8, it is disconcerting to note that 13 of the educators who took part in the study were not yet adequately trained, as they possessed a three-year and two-year teaching diploma, respectively.

In the following section, section 5.3, I focus on the data analysis for the focus group interviews.

5.3 DATA ANALYSIS FOR FOCUS GROUP INTERVIEWS

In the following section, I highlight the participants' understanding of what diverse learning styles entail.

5.3.1 Data analysis: understanding of diverse learning styles

Question 1a: What is your understanding of diverse learning style needs?

The following themes were identified among the responses of the participants.

Understanding of learning style needs in terms of abilities and intelligence

Participants indicated that they understand learning style needs as different abilities and intelligence by indicating the following.

Learning styles refer to: "*the way you treat them is according to their learning ability"* (C1), *"different learners learn according to their intelligences"* (C212), *"different learners with different abilities", "different ways of teaching them according to their abilities"* (C413), "*it means different abilities of learning by different learners"* (C420), and learners need to *"be covered according to their abilities"* (C414).

According to the data obtained, the participants also indicated that they understand learning styles in terms of individual ways of learning.

Individual ways of learning

In this regard, the participants *inter alia* expressed the following views:

Learning style needs refer to *"different learners and the way they learn"* (C2), *"learners* (who) *learn differently from other"* (C107), *"when learners learn their own way"* (C211), *"learners are different and have their different ways of learning"* (C310), and *"different ways of learning by different learners"* (C418).

A final theme that emerged from the data is:

Understanding learning styles in terms of tempo with which information is processed

In relation to the aforementioned theme, the participants indicated that learning styles are: *"there are those who will grasp the information faster"* (C1), *"the pace in which learners are taught or receive information will not be the same"* (C3), and "*I am thinking of slow learners and fast learners*" (C4).

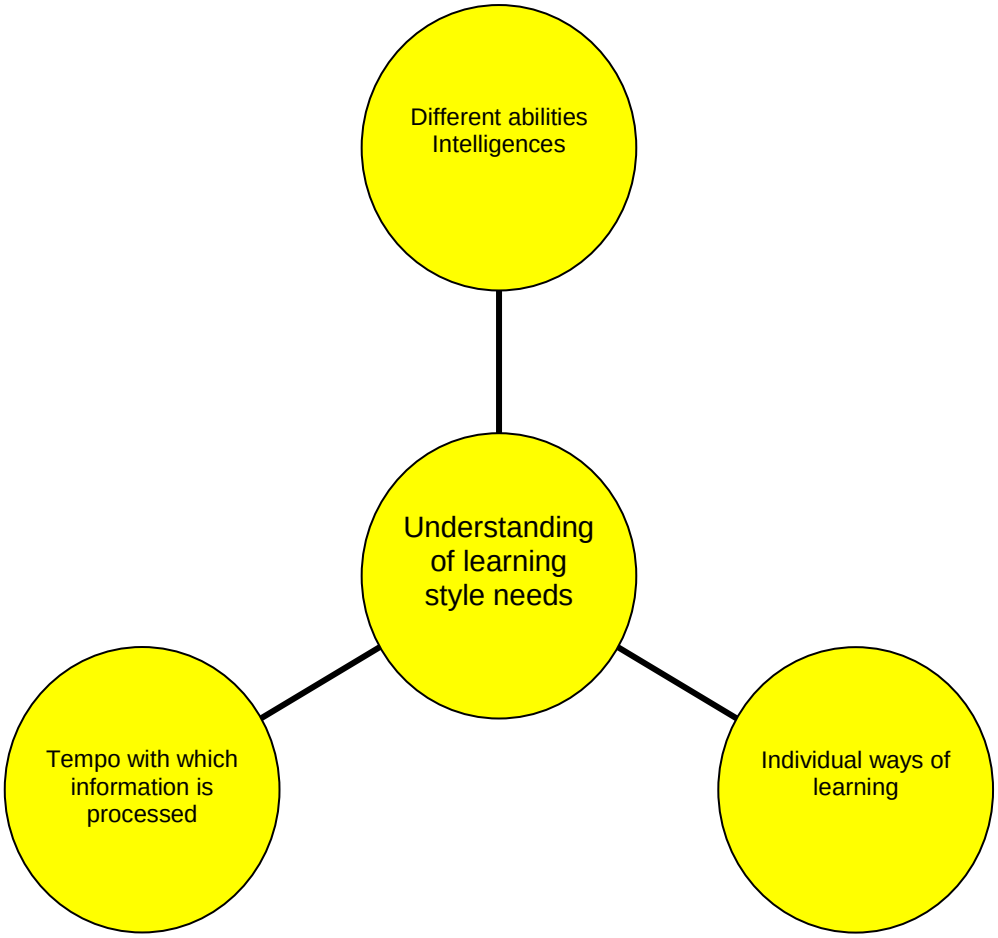
Discussion

Based on the aforementioned responses, it appears that the educators who took part in the study understand learning style needs very differently, and that their understanding is not completely in line with what is revealed in the literature. According to the literature, learning styles refer to orientations towards approaching learning tasks and processing information in different ways (Grosser & De Waal, 2006:79) (*cf.* 3.2). Lovelace (2005:176) asserts that learning styles are the ways in which learners begin to concentrate on, process, internalize and remember new and difficult academic information (*cf.* 3.2). Furthermore, a learning style is composed of biological and developmental characteristics that make teaching environments, methods and resources effective for some learners and ineffective for others (Smith, 2002:64; Lovelace, 2005:176) (*cf.* 3.2). Learning styles and inclusive education as identified by Smith (2002:64) and Cuthbert (2005:235-249), refer to the way in which the context influences the validity of learning. Lovelace (2005:177) mentions that many learners can learn things that are easy for them without using learning styles, but all learners can learn new and difficult information better when they capitalize on their learning styles (*cf.* 3.2). In line with the viewpoints of Armstrong (2000:321) and Gardner in Nieman and Pienaar (2006:86), the educators pointed out that learning styles can be related to intelligence (*cf.* 3.3.9).

The themes that emerged from the interview responses do not provide convincing evidence that educators fully understand what is meant with

learning style needs. The themes obtained from the educator responses are summarized in Figure 5.1.

Figure 5.1: Understanding of learning style needs



Discussion

The implication of the educator responses indicated in Figure 5.1, is that because educators apparently do not fully understand what learning style needs are, they might not be able to accommodate all learners in an inclusive classroom. Although many educators indicated rightfully that learning styles refer to *"individual ways of learning",* nobody qualified the concept *"individual"* by linking it to specific learning style needs. Literature

indicates that it is critical to accommodate learning styles because once educators know their learners' learning styles they can use that information in teaching, supporting, counselling and facilitation (Kruger, 1998:107) (*cf.* 3.2.2). It is questionable whether educators will be able to accommodate diverse learning style needs if they do not have a comprehensive understanding of what learning style needs refer to. If educators are not able to accommodate diverse learning styles during teaching, the goal and the purpose of an inclusive school, namely to contribute towards the development of an inclusive society, where all members of society are able to fulfil their potential and participate optimally, and where respect for and valuing of diversity in the context of social integration is an active value, could be defeated (Donald *et al*., 2002:34; Mowes, 2002:42; Du Plessis, 2007:35) (*cf.* 2.4, 2.4.1).

What I find disconcerting about the responses, is the misconception that educators link learning styles to learners being fast or slow. The misconception could point to the fact that learners are still viewed as members of categorical groups (Du Plessis, 2007:35) (*cf.* 2.4), and not as individuals. Another misconception that transpired from the responses is the idea that learning styles are linked to differences among learners regarding their language of communication and culture, *"learners are different in their language of communication, cultures"* (C416).

As argued by Muthukrishna and Schoeman (2000:315-335) and Swart and Pettipher (2005:3-20) (*cf.* 2.5), if educators do not understand what learning styles imply, they could find it problematic to accommodate the diverse learning styles, resulting in pedagogical barriers that could impact negatively on learning.

5.3.2 Data analysis: types of learning styles accommodated during teaching

Question 1b: Which learning styles do you accommodate during teaching and learning in an inclusive Life Orientation classroom?

The following themes emerged from the data in response to the types of learning styles that the educators accommodate in their Life Orientation classrooms.

Educators accommodate different learning tempos during teaching

Some of the responses of the educators referred to the following: *"yes, we accommodate all .....faster Thinkers and slow learners"* (C113), *"some are slow learners, some are moderate and some are fast Thinkers"* (C216), "*I have those that are slow learners and those who understand fast"* (C319), *"those that are slow learners and those who understand as fast thinkers"* (C421), *"I have fast, moderate and slow doers, watchers"; "those that are faster, the clever thinkers"* (C422), *"those learners that you can call intelligent thinkers, there are those who are average and those that are very slow"* (C423), *"intelligent thinkers, moderate doers and the strugglers"* and *"those learners who are faster than others and those that are very slow"* (C428).

Based on the aforementioned responses, it appears that the educators understand learning styles in terms of learners being fast or slow in understanding information. In addition to this, it also seems as if the educators incorrectly perceive *"thinkers"* as learners who are intelligent and can think fast, the "*doers"* are learners who are the average learners and the *"watchers"* are the slow learners. Although the responses revealed an awareness of some of the learning styles indentified in the literature, namely *"thinkers", "watchers*" and *"doers"*, the educators appear not to understand what each of the learning styles exactly implies, as they are merely linked to the tempo with which information is processed and understood. The educators' responses do not reveal that *"thinkers*" are learners who prefer to learn by creating understanding for themselves and prefer activities where they can engage in logical analysis (Kolb, 1984:199; Little, 2004:8) (*cf.* 3.3.1).

From the responses, I could also not deduce that the educators regard Divergers (Watchers) as learners who favour learning through perception and observation, and that Accommodators (Doers) are learners who prefer practice to theory (Kolb, 1984:199; Leider, 1997:35, 120; Little, 2004:8) (*cf.* 3.3.1, 3.3.6, 3.3.13). I therefore argue, that the educators do not seem knowledgeable on the various learning style needs that learners have and therefore do not accommodate diverse learning preferences. The responses obtained could perhaps be linked to the fact that the responses obtained for the first question indicated a lack of understanding of what learning styles imply (*cf*. 5.3.1).

A second theme that emanated from the responses refers to educators accommodating different personality types during teaching.

Accommodating different personality types during teaching

In line with the Myers Briggs Type Indicator Model of learning styles (Lawrence, 1994:89) (*cf.* 3.3.3), the educators pointed out that they accommodate extroverts and introverts during their teaching. Examples of the educators' responses referred to the following: "*there are those learners who are reserved, ... introverts and extroverts .....are those learners who like talking"* (C10), "*I have many introvert than extrovert learners"* (C318), and "*others are talkative, and others are too quiet"* (C425).

As a third theme, the responses indicated that the educators regard link different levels of achievement to learning style diversity.

Accommodating different levels of achievement during learning

Linked to the aforementioned theme, some of the responses noted are the following: *"I have good performers and poor performers; maybe they can be Thinkers and Doers"* (C115), *"in my class there are achievers and underachievers"* (C321), and *"quick achievers, average achievers and Doers or slow learners"* (C424).

The responses again indicated that the educators apparently do not understand what diverse learning style needs imply, as the quality of academic performance was equated to learners being "*thinkers"* or "*doers"*, where the "*thinkers"* are regarded as the learners who are good achievers, and the "*doers"* are the learners who do not perform well or are the *"slow learners".* The perceptions of the educators are not in line with literature according to which, *"thinkers"* prefer independent learning, "*doers"* prefer practical hands-on activities and *"watchers"* prefer auditory and visual learning (Schurr, 1994:45; Leider, 1997:52) (*cf*. 3.3.6, 3.3.7). It is also noteworthy to mention, that the responses of the educators do not refer to the learners who enjoy learning through sensing and feeling, which creates the impression that learning through sensory experiences is not accommodated in the classrooms that took part in the research.

A fourth theme identified from the responses, links the accommodation of learning styles to different ways of learning.

Accommodating learning styles is linked to different ways of learning

Based on the responses obtained from the educators, it appears that they are aware of some of the preference learners might have during teaching and learning. Their responses *inter alia* referred to the following: *"some like to touch, and are the Sensors"; "some in oral they are good"; "others do not talk, they are always quiet"* (C11); "*some like to do practical ..... and they are Doers"; "others like an activity whereby they are not writing but playing, they are good"* (C12), *"there are those learners who only like to demonstrate..... and they are Doers"* (C13), and *"the learners who are emotional, Feelers, ...if they do not know the answer they cry*" (C426).

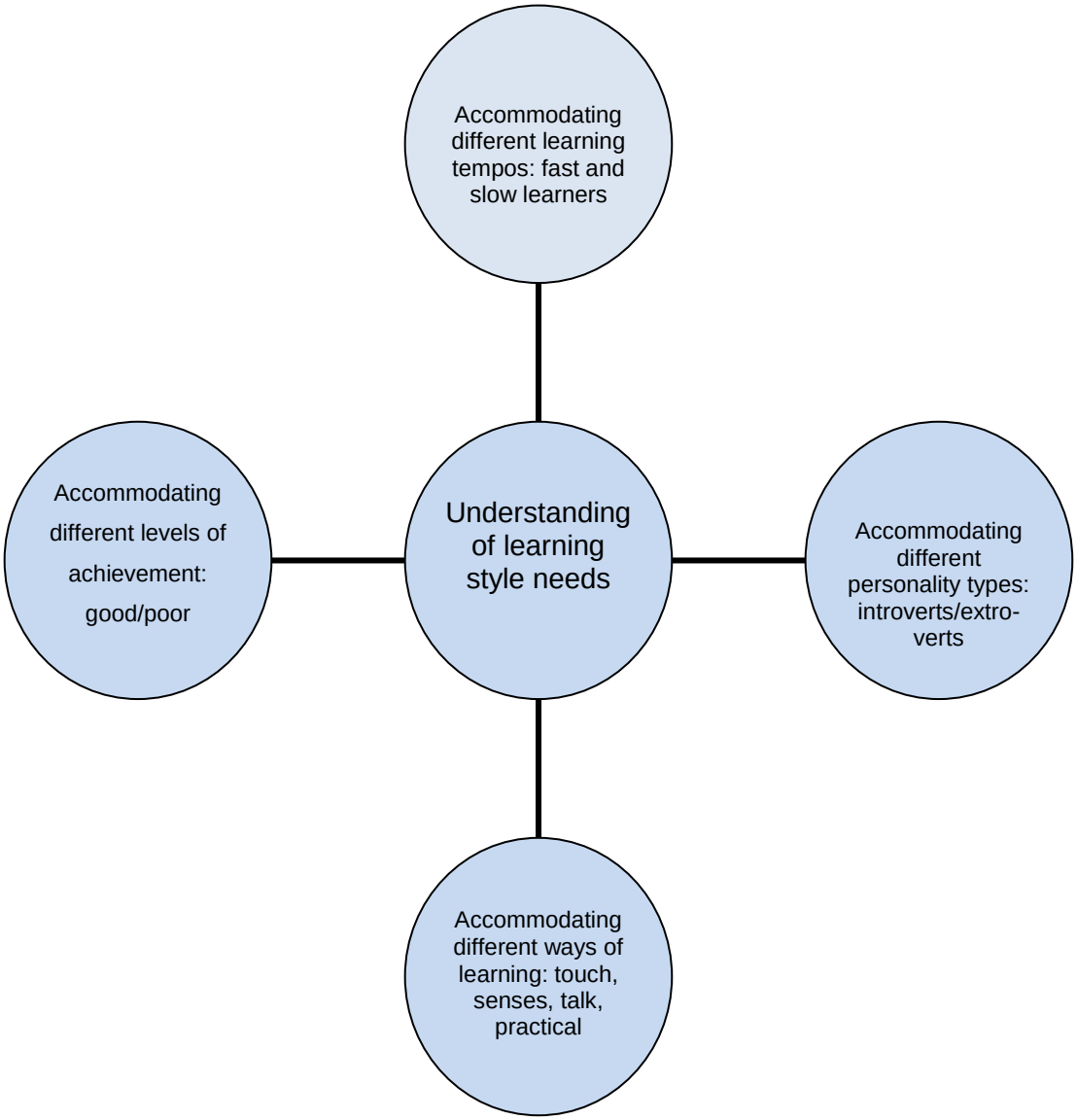
Although the responses indicate that the participants regard learning style needs as different ways of learning, they provide limited examples of how they accommodate the different ways of learning. Learning style preferences comprise more than just a preference for practical work, oral work, and writing, playing and demonstrating. The limited understanding of the educators regarding learning style preferences, could point to the fact that the

educators who took part in the study have limited knowledge regarding learning style needs, which was confirmed in the responses to question 1 (*cf.* 5.3.1). In contrast to the limited responses of the educators, literature highlights the fact that learning style needs can be related to the following aspects: physiological aspects, personality aspects, emotional factors, sociological factors, styles to process information, level of dependency during teaching and learning, task functioning in the brain and intelligence (Kolb, 1984:199; Hermann, 1990:66; Lawrence, 1994:89; Felder, 1996:20; Lovelace, 2005:117; Gardner in Nieman & Pienaar, 2006:86; Nieman & Pienaar, 2006:85-86) (*cf.* 3.3.1 - 3.3.9, 3.3.13). The educators who took part in the study appear to be unaware of the aforementioned aspects that influence learning style needs.

Two of the participants indicated that accommodating learning styles depends on the task being taught: *"learning styles, it will depend on the task that you will be tackling"* (C9), and *"it depends upon what you are teaching at that time you can have discussions, role-plays"* (C217). The latter two responses also do not support the literature where it is argued that all learning, irrespective of what is taught, should involve four stages that link directly with the learning styles, namely, concrete experience, reflective observation, abstract conceptualization and active experimentation (Kolb, 1984:96; Felder, 1996:18; Kramer, 2006:6) (*cf.* 3.3.13, 3.4)

The responses of the educators are summarized in Figure 5.2.

Figure 5.2: Types of learning styles accommodated



Discussion

The responses to this question indicate that the educators appear to have partial knowledge on exactly what the learning style preferences of learners entail. I argue, that the educators' responses to this question contradict what literature reveals regarding the accommodation of learning styles during teaching. Their responses reveal that they do not understand the four major categories of learning preferences, namely:

- Convergers /Sensors and Feelers prefer to learn by intuition and by being sensitive to feelings and atmosphere. They like to see, hear and feel in order to learn, and rely on experience and intuition.
- Divergers/Watchers prefer to learn through perception and observation. They like lectures, demonstrations and similar activities where they observe.
- Assimilators/Thinkers, prefer to analyse information logically and create understanding for themselves.
- Accommodators/Doers, prefer to learn by trying things out and are willing to take risks, prefer practice to theory and enjoy learning activities that enable them to do something, such as projects, tasks and discussions. (Kolb**,** 1984:199; Little (2004:8) (*cf.* 3.3.1).

The importance of accommodating learning style needs in inclusive classrooms is to ensure that all learners receive equal teaching that will unleash their learning potential (Levinrad, 2000:14) (*cf.* 3.4). Inclusion is about supporting all learners so that the full range of learning needs can be met (SA, 2001:16, 17) (*cf.* 2.2, 2.3). I am concerned that the educators who took part in the study do not yet fully comply with the principles of teaching and learning in an inclusive classroom.

The problems that are experienced by learners if learning style needs are not accommodated in a balanced way, is that learners who are not accommodated will not benefit during teaching and learning and will not achieve as well as their counterparts who are accommodated (Felder, 1996:18; Van Rensburg, 2002:136; Dasari, 2006:26) (*cf*. 1.3, 3.4) . Their individual capacity to learn will decrease, motivation to learn will decrease, and frustration will not be avoided because of being exposed to an inefficient learning process (Larkin-Hein, 2000:2; Levinrad, 2000:4; Dasari, 2006:27; Van Rensburg, 2002

:136) (*cf.* 3.4). Classrooms that bear these characteristics indicate infringements to learners' rights to quality education as stipulated by the Constitution (SA, 1996b:21). If learners' needs are not a

ccommodated, they will not be empowered in developing their individual strengths and their ability to participate critically in the process of learning (Van Rensburg, 2002:36) (*cf.* 3.4). Furthermore, the maximizing of the participation of all learners and uncovering and minimizing barriers to learning is compromised (McGregor & Vogelsberg 1998:33; Salend, 1999:114; SA, 2001:16; Rakholile, 2006:11) (*cf.* 2.2). In addition to the aforementioned, if the educators who took part in the study cannot accommodate diverse learning styles during teaching, learning is not made comfortable, and learners could experience problems with concentration and internalizing and remembering information (Dunn & Giggs, 2000:19; Lovelace, 2005:176) (*cf.* 3.2, 3.3.2).

5.3.3 Data analysis: ways of accommodating diverse learning styles

Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?

The following themes were extracted from the verbatim transcripts of the participants.

Separating learners into groups of fast and slow learners and adapting the difficulty level of the work

In relation to the theme above, examples of responses received include the following: *" those who are fast, Thinkers learners that I most give enrichment"; "those that are slow Doers, I just sit around the table just talk to them"* (C17), "*fast learners get extra work and slow learners you give individual attention*" (C18), *"slow learners get remedial work"* (C19), *"fast learners get more work and slow learners get simple work"* (C329), *"I give the quick achievers more difficult work, the average achievers I give moderate work and slow learners simple work"* (C429), *"clever learners get more challenging work"* (C435), and "*I give more work to hard workers and others get work that they can easily do and understand"* (C436).

From the responses received, I carefully conclude that the educators who took part in the study seemingly do not comply with the values and beliefs of an inclusive school. I base my argument on the fact that by just accommodating

slow and fast learners during teaching does not reflect a flexible curriculum. What is required is that teachers employ a variety of teaching, learning and assessment methodologies to accommodate diverse learning needs (SA, 2001:6, 16, 47; Udvari-Solner & Kluth, 2008:15; SA, 2007:6; Dunbar-Krige & Van der Merwe, 2010:162) (*cf.* 2.2, 3.8). The educators' responses mainly regard differentiating between slow and fast learners and adapting the difficulty level of the work as a way of accommodating diverse learning styles.

A second theme derived from the responses is the use of group work and mixed ability grouping to accommodate diverse learning styles.

Group work and mixed ability grouping to accommodate diverse learning styles

In order to support the mentioned theme, I provide the following examples of responses received: *"I give the activity and divide them into groups, they can discuss"* (C122), "*I group them in small groups to work together as a group"* (C123), "*You can group them..... they can sit in groups according to their abilities"* (C224), "*Yes, we group them according to their abilities"* (C225), *"I put them according to their abilities and then mix groups to assist others who cannot easily learn"* (C228), *"I group them based on their abilities"* (C326), *"I mix different learners in different abilities, and each learner learns from others when they do activities"* (C328), *"usually what I do is a group work"* (C431) and "*group work works for me..... they share and help each other and learn from each other"* (C434).

It appears that the educators who took part in the study are not familiar with ways in which diverse learning styles in inclusive classroom settings could be accommodated. The frequent use of group work indicates that only one particular learning style need will be accommodated, namely that of the Accommodator (Doer), or active learner who prefers getting involved in interactive and interpersonal learning as well as discussions (Kolb, 1984:199; Felder, 1996:20; Leider, 1997:52, 120; Gardner in Nieman & Pienaar, 2006:86) (*cf.* 3.3.1, 3.3.5, 3.3.6, 3.3.9).

A summary of the themes identified from the responses is indicated in Figure 5.3.

Figure 5.3: Teaching to accommodate diverse learning style needs

Discussion

According to Donald *et al.* (2002:34), accommodating barriers to learning and development, expresses a commitment to the development of inclusive sites of learning that foster the inclusion of all learners within schools, and accommodate the diverse needs of the learner population (*cf.* 2.4). The instructional practices of the educators who took part in the study do not reflect this commitment, which implies that an important goal of an inclusive

school, namely respecting diversity, might not be achieved in the classrooms that took part in the research (Mowes, 2002:42) (*cf.* 2.4.1). In the context of the study, respecting diversity in the learner population means:

- acknowledging and supporting the rights of all learners to full participation in the learning and teaching process; and
- developing a flexible curriculum that meets the diverse needs of the learner population (SA, 2001:47; Lomofsky & Lazarus, 2001:312) (*cf.* 2.3.3.4)

If learners' learning styles are not accommodated, they will not be empowered to develop their individual strengths, and their ability to participate critically in the process of learning will be hampered (SA, 1997:38; SA, 2001:16; Lomofsky & Lazarus, 2001:302; Mowes, 2002:42; Du Plessis, 2007:35) (*cf.* 2.4).

The themes that emerged from the interview responses do not provide convincing evidence that the educators who took part in the study know how to accommodate diverse learning style needs. The responses received could point to the fact that educators do not have a comprehensive understanding of learning style needs, as revealed in the responses reported in 5.3.1 and 5.3.2. I argue that the educators who took part in the study are in need of support to help learners to build skills in preferred and less-preferred styles of learning (Felder, 1996:18; Muthukrishna & Schoeman, 2000:316) (*cf.* 2.5, 3.3.13)

5.3.4 Data analysis: the use of teaching methods

Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles?

The following themes were derived from the interview responses.

A variety of teaching methods and strategies used across classrooms but not in individual classrooms

In Table 5.9 below, I summarise the trends noticed among the responses of the educators regarding the teaching methods and strategies that they employ during teaching.

Table 5.9: Summary of teaching methods and strategies used

Telling	C25, C128
Discussions	C25, C128, C129, C131, C232, C236, C337, C439, C442
Peer tutoring	C26, C129, C335, C439
Story telling	C28
Group work	C28, C29, C128, C132, C335, C441, C443
Lecture	C130, C132, C236, C335, C443, C444
Demonstration	C130, C337, C4490, C444
Role-play	C131, C232, C334, C337
Practical	C132
Case studies	C235, C333, C336, C438
Research	C131, C237
Interviews	C237
Play	C238
Physical exercise	C238
Questioning	C237, C333, C334, C336, C438, C444
Reading method	C232
Debates	C337

Based on the information in Table 5.9, the most frequently used teaching methods and strategies across the classrooms involved in the research are the following:

- Direct Teaching Method: lectures, demonstrations, questioning
- Interactive Teaching Method: group work, peer tutoring, play, physical exercise

- Independent Teaching Method: research, discussion

- Indirect Teaching Method: role-play, case studies

A strong focus is placed on the use of group work, which was also noted in the responses obtained for question 3 (*cf.* 5.3.3). Group work promotes interactive and interpersonal teaching and learning that is favoured by Accommodators (Doers) (*cf.* 3.6.4). Furthermore, the individual educators who took part in the study do not use a variety of teaching methods in their inclusive classroom, but rely on one or two particular methods. In this regard, I highlight the following examples: participant C128 focuses on telling, discussion and peer tutoring, participant C129 focuses on the use of discussion and peer tutoring, participant C131 emphasises discussion, role-play and research and participant C132 favours discussion, group work and practical work.

This practice is not in line with the view of Kolb (1984:199) (*cf*. 3.3.1) and Arndt and Underwood (1990:30) (*cf.* 3.3), who argue that in achieving Learning Outcomes, learners should be exposed to a cycle of learning that involves sensory experience, reflective observation, abstract conceptualization and active experimentation.

Discussion

The responses of the educators do not support the literature. According to the South African Schools Act (SA, 1996a:24) and Rakholile (2006:11), inclusion is about supporting all learners as a whole so that the full range of learning needs can be satisfied (*cf*. 2.2)

Killen (1998:11), Mahaye and Jacobs (2007:176), Monyai (2006:107-112) and Arends (2009:290-295) (*cf.* 3.6), explain teaching methods as a way of sensing, thinking and feeling and of being a design embodied in action. In essence, their explanation implies that four teaching methods with their respective strategies should be utilized during teaching and learning, namely the Direct, Indirect, Independent and Interactive Teaching Methods. Each one

of the mentioned teaching methods links well with a particular learning style need (Schraw & Olafson, 2003:185; Schraw & Olafson, 2008:25-41) (*cf.* 3.9).

According to literature the Direct Teaching Method is an important and vital component of all teaching and learning, but, as with all things, it should be one part of the overall approach to teaching, rather that the only approach (Grosser, 2001:23) (*cf.* 3.6). It is educator-centred, where the educator delivers the content and directs all learner activities (*cf.* 3.5.1) and only accommodate certain learners when this method is utilized most of the time, namely Convergers/Sensors/Feelers and Divergers/Watchers. This method is preferred by learners who like to learn through perception and observation and rely on experience while the educator guides discussions through presentations, demonstrations and the lecture method (Killen, 1998:4-6; Little, 2004:8; Monyai, 2006:107-112; Mahaye & Jacobs, 2007:175; Arends, 2009:290-295) (*cf*. 3.6.1).

In turn, if educators only use Indirect Teaching Methods, they will only accommodate learners who like to learn through logical analysis and creating understanding for themselves, namely the Assimilators/Thinkers (Borich, 2003:221; Kramer, 2006:101) (*cf.* 3.6.2), as well as learners who enjoy reflecting independently on information (Divergers/Watchers). Indirect teaching is characterized by a high degree of learner involvement in the construction of knowledge. According to Slavin (1997:244), Killen (1998:106, 176, 104-110), Grosser (2001:23), Borich (2003:221), Kramer (2006:101), Van Rooy (2006:85,105), Mahaye and Jacobs (2007:176-200), Ognibene (2007:24-27) and Philpott (2009:38, 47) (*cf*. 3.6.2), Indirect Teaching holds a high potential for building higher order thinking skills, personal values, individual responsibility for learning and independent meaning-making.

If educators only concentrate on the use of Independent Teaching Methods, they will, according to Slavin (1997:244), Killen (1998:106, 176, 1040110), Grosser (2001:23), Van Rooy (2006:85, 105) and Mahaye and Jacobs (2007:176-200) accommodate the learning preferences of Assimilators (Thinkers) and Divergers (Watchers). In addition to the aforementioned, Grosser and De Waal (2006:21) and Prashing (2006:15) mention that

Accommodators (Doers) also learn effectively with indirect, transactional, interactive teaching, through facilitation and co-operative learning. The writers mention that the Assimilators (Thinkers) and Divergers (Watchers) prefer autonomous, independent and individual-centred instruction; meaning making and reflection, respectively (*cf.* 3.10.2).

If the educators who took part in the study do not use a variety of teaching methods and strategies, it could lead to some learning style needs not being accommodated and being neglected (Schraw & Olafson, 2003:185) (*cf.* 3.9). The disadvantage is that some learners will not benefit from teaching and learning and will not achieve to the best of their ability; their individual capacity and motivation to learn will decrease, and frustration is caused by being exposed to inefficient learning processes (Van Rensburg, 2002:136; Larkin-Hein, 2000:2; Dasari, 2006:27) (*cf.* 3.4). In short, learners' fundamental rights to quality education will be infringed (SA, 1996b:21; De Waal & Grosser, 2009:801) (*cf.* 2.3.3.4, 3.9).

Learners are disadvantaged if educators do not use a variety of teaching methods during teaching and learning. Learners' interest and thinking will not be aroused and they will not be stimulated to engage in further learning (Larkin-Hein, 2000:2; Dasari, 2006:27) (*cf*. 3.4). Furthermore, learners will not be challenged, assisted to gain new knowledge and feel responsible for their own learning (Van Rooy, 2006:105) (*cf.* 3.6.3.3).

The use of a variety of teaching methods encourages learners to undertake learning tasks by themselves. They rely on their own efforts and think through every aspect of the task without constant and close management by the educators (Kramer, 2006:101) (*cf.* 3.6.2). The use of a variety of teaching methods provides an opportunity to educators to make use of learners' views, experiences and opinions. If educators are able to vary their teaching practices according to diverse learner needs, all learners get the opportunity to take part in the class (Killen, 1998:64) (*cf.* 3.6.1). Learners' thinking ability, processing of information, language skills, communication skills and reasoning skills are developed with the use of various teaching methods (Killen,

1998:64; Van Rooy, 2000:85, 105; Grosser, 2001:45; Kramer, 2006:104; Mahaye & Jacobs, 2007:176) (*cf*. 3.6.1 - 3.6.4).

It is therefore imperative and crucial that educators use a variety of teaching methods in their classrooms to assist different learners to gain knowledge in different ways in order to achieve expected and desired Learning Outcomes effectively.

McGregor and Vogelsberg (1998:33) and Salend (1999:114) indicate that inclusion is based on meeting the needs of all learners, as well as respecting and learning from each other (*cf.* 2.2). Education of al learners requires developing teaching practices that accommodate individual differences to benefit all learners (UNESCO, 1994:11-12, Udvari-Solner & Kluth, 2008:15; Dunbar-Krige & Van der Merwe, 2010:162) (*cf.* 2.2)

I argue, that the educators who took part in the study do not accommodate all learning styles, and that their instructional practices contradict White Paper 6 (SA, 2001:16), where it is stipulated that inclusion accepts and respects the fact that all learners are different in some way and have different learning needs (*cf.* 2.3.3.4). Inclusion is about including and meeting the needs of everyone (Du Plessis, 2007:35) and prejudices should be accommodated wherever necessary, to view differences as a rich resource to benefit all. Furthermore, if learning styles are not accommodated, learners are not given the opportunities for individual learning as indicated by Mowes (2002:42). He argues that diversity is believed to strengthen the school while offering all its members greater opportunities for learning (*cf.* 2.4.1). Educators must create an environment in which all learners are valued equally, and experience teaching, learning and assessment that will expand their potential to contribute positively to society, and to cope with and respond to challenges of the world.

According to White Paper 6 (SA, 2001:16) (*cf.* 2.3.3.4, 2.4), learning methodologies should meet the needs of all learners. If educators do not ensure that learners are all accommodated through their teaching methods, then an inflexible curriculum that can lead to learning breakdown, and

pedagogical barriers to learning will occur (Muthukrishna & and Schoeman (2000:315-335) (*cf.* 2.5).

Seemingly, the educators who took part in the study experience some of the challenges faced by educators who teach in inclusive classrooms, namely inadequate knowledge, skills and training to implement inclusive education effectively and a lack of knowledge regarding the methods and processes to be used in teaching to provide a flexible curriculum (SA, 2001:6; Harris & Schubert, 2001:54; Hay *et al.,* 2001:214; Hepburn, 2001:66; Hunter & Williamson, 2001:87; Akintola & Quinlan, 2003:31 (*cf.* 2.4.3).

5.3.5 Data analysis: learning activities

Question 1e: Which learning activities do you provide to accommodate diverse learning styles in an inclusive Life Orientation classroom?

The following themes were derived from the interview responses.

A variety of learning activities are used across classrooms but not in individual classrooms

In Table 5.10 below, I summarise the trends noticed among the responses of the educators regarding the learning activities that they employ during teaching.

Table 5.10: Summary of learning activities used

Questions: oral and written	C136, C240
Fieldtrips	C138, C324
Interviews	C138
Debates	C137, C342, C344
Assignments	C37, C137, C244, C445, C449
Research	C137, C243, C244, C445, C449
Role-play	C139, C341, C346, C451
Discussions	C140, C242, C343, C448

Group activities	C33, C346
Homework	C33, C244, C345, C449
Class work	C33, C37, C345
Posters	C34, C245, C341, C345, C446
Projects	C37, C447
Fill-in, True and false exercises	C241
Analysing	C242, C448
Drama/small plays	C451
Collages	C341, C446
Brainstorming	C344
Models	C346
Demonstrations	C346
Case studies	C445
Designing	C445, C446
Tests	C447

In summary, Table 5.10 reveals that the educators who took part in the study mainly utilize the following activities that accommodate Assimilators/Thinkers, Convergers (Sensors/Feelers) and Accommodators/Doers:

- Activities that demand independent work: homework, assignments, projects and research.
- Activities that focus on interactive participation: debates, role-plays and discussions.
- Practical activities: poster-making and collages.

Table 5.10 indicates that the educators' responses indicate a wide variety of activities, which are used across all the classrooms involved in the research. However, the responses of the individual educators are not in line with the literature where it is indicated that educators need to select and plan a variety of learning activities in a balanced manner to accommodate diverse learners

in the Life Orientation classroom. In order to support the aforementioned argument, I provide the following examples: participant C137 appears to utilize only assignments and research, participant C138 utilizes fieldtrips and interviews and participant C240 favours the use of oral and written questions.

A variety of learning activities is necessary in order to enhance learner motivation to perform such learning activities (Van Rensburg, 2002:182) (*cf.* 1.2). It appears as if the educators favour the use of particular activities instead of including a variety of activities in their classrooms.

Discussion

In contrast to the responses of the educators, Arndt and Underwood (1990:30) and Sutliff and Baldwin (2001:270) (*cf.* 3.7) indicate the importance of including the following activities during teaching and learning to accommodate diverse learning styles (*cf*. Table 3.5):

small group discussions, practical exercises, simulations, games and role-playing are suitable for Convergers/Sensors/Feelers. Creative problem-solving, personal journals, discussion groups and brainstorming, questioning and reflection activities, as well as observations, are suitable for Divergers/Watchers. Lectures, presentations, analogies, model building, theory-building and questioning, are preferred by Assimilators/Thinkers. Finally, case studies, fieldwork, projects and homework are regarded as suitable learning activities for Accommodators/Doers (*cf.* 3.7).

5.3.6 Data analysis: assessment

Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive classroom?

The following themes emerged from the verbatim transcripts.

It appears as if a variety of assessment methods and strategies is used across the classrooms of the educators who took part in the study, but not in individual classrooms. Table 5.11 summarises the variety of assessment methods and strategies as indicated in the responses of the educators.

Table 5.11: Summary of assessment methods and strategies used

Tests	C40, C44, C145, C352, C353, C456, C458, C459
Exams	C40, C44, C352, C353, C458, C459
Group assessment	C41, C16, C148, C250, C350
Projects	C44, C456, C460
Interviews	C44
Posters	C44
Educator assessment	C144, C249, C339, C454
Peer assessment	C144, C147, C248, C339, C454
Self-assessment	C144, C247, C251, C339, C351, C454
Portfolios	C354
Discussion class work	C354
Homework	C354
Assignments	C456, C458, C460
Case study	C456
Research	C456
Question and answer	C457

From the summary in Table 5.11, I conclude that both assessment of learning and assessment for learning appear to be utilized in the classrooms of the educators who took part in the research (Chappius & Stiggins, 2002:40-43; Stiggins, 2002:40-43) (*cf.* 3.8.1, 3.8.2). The most frequently used assessment methods and strategies reported were assessment by means of tests and exams. On the other hand, assessment for learning is evident in the use of self-assessment, peer assessment, group assessment, and the utilization of assessment strategies such as interviews, case studies and research projects. A point of concern is the fact that it appears that individual educators resort to a few assessment strategies, which make the accommodation of diverse learning needs problematic. In this regard, I mention the following examples:

participants C44, C352, 459 only make use of educator assessment and participant C16 only relies on group assessment

Discussion

The responses do not correspond with what the literature reveals regarding the accommodation of diverse learning styles through assessment (Maree & Fraser, 2004:51; SA, 2007:7) (*cf*. 3.8.2). I argue, that if the educators who took part in the study do not assess learners using a variety of assessment methods, it could lead to learners being denied opportunities for the following: setting their personal goals and monitoring their progress, cooperation among learners, assisting one another and dividing work among one another to contribute in a single task or product, group participation, and monitoring their own contributions and those of their peers on a particular task. I carefully assume, that the educators who took part in the study experience assessment as a challenge, or lack knowledge and skills on how diverse learning needs should be assessed (Goliber, 2000:28; Kelly, 2000:47; Sands *et al.,* 2000:43; Smart, 2000:31; Swart *et al.,* 2000:77; SA, 2001:6; Hall, 2002:34; Harris & Schubert, 2001:54; Hay *et al.,* 2001:214; Hepburn, 2001:66; Hunter & Williamson, 2001:87, Akintola & Quinlan, 2003:31) (*cf*. 2.4.3).

If educators mainly focus on educator assessment by means of objective and subjective test items, Convergers (Sensors/Feelers), Divergers (Watchers) and (Assimilators) (Thinkers) will be accommodated. Similarly, if there is an emphasis on peer assessment and group assessment, Accommodators (Doers), Assimilators (Thinkers) and Divergers (Watchers) will be favoured because this type of assessment allows them to get involved in the assessment process that will also provide an opportunity to reflect and express an own opinion (Kolb, 1984:199) (*cf.* 3.3.1). The Assimilators/Thinkers will probably enjoy self-assessment activities because these activities will allow them to do what they like most, namely to create understanding by themselves (Kolb, 1984:199) (*cf.* 3.3.1). The Accommodators (Doers) will favour performance-based assessment, where practical demonstration is required (Maree & Fraser, 2004:53) (*cf*. 3.8.2).

5.3.7 Data analysis: the effects of using one teaching method

Question 2a: What is the effect of using one method of teaching on a continuous basis?

In response to the aforementioned question, the responses of the educators revealed the following themes:

Lack of understanding and participation during teaching and learning

In support of the first theme that was identified, the following examples of educator responses were received: *"learners learn in different ways, they do not understand the same method"* (C152), *"other learners participate and understand more than others they do not understand the same"* (C357), *"one method not all learners will understand"* (C361), and *".....clever ones will participate more than moderate slow ones"* (C469).

A second theme refers to lack of concentration and attention during teaching and learning.

Lack of concentration and attention during teaching and learning

In support of the viewpoint of Lovelace (2005:176) (*cf*. 3.2), who argues that failing to accommodate diverse learning style needs will lead to a lack of concentration, the participants indicated that if learning style needs are not accommodated *"some learners do not listen well in the class, they disturb others"* (C362) and *"the slow learners do not concentrate*" (C469).

The educators were also of the opinion that if learning style needs are not accommodated, teaching and learning is experienced as boring and not enjoyable.

Teaching and learning experienced as boring and not enjoyable

Linked to the aforementioned theme, the following responses were obtained:

"others will become irritated because you use the same method" (C152), *"one method is boring"* (C155), *"not all learners are listening to you, some I think is*

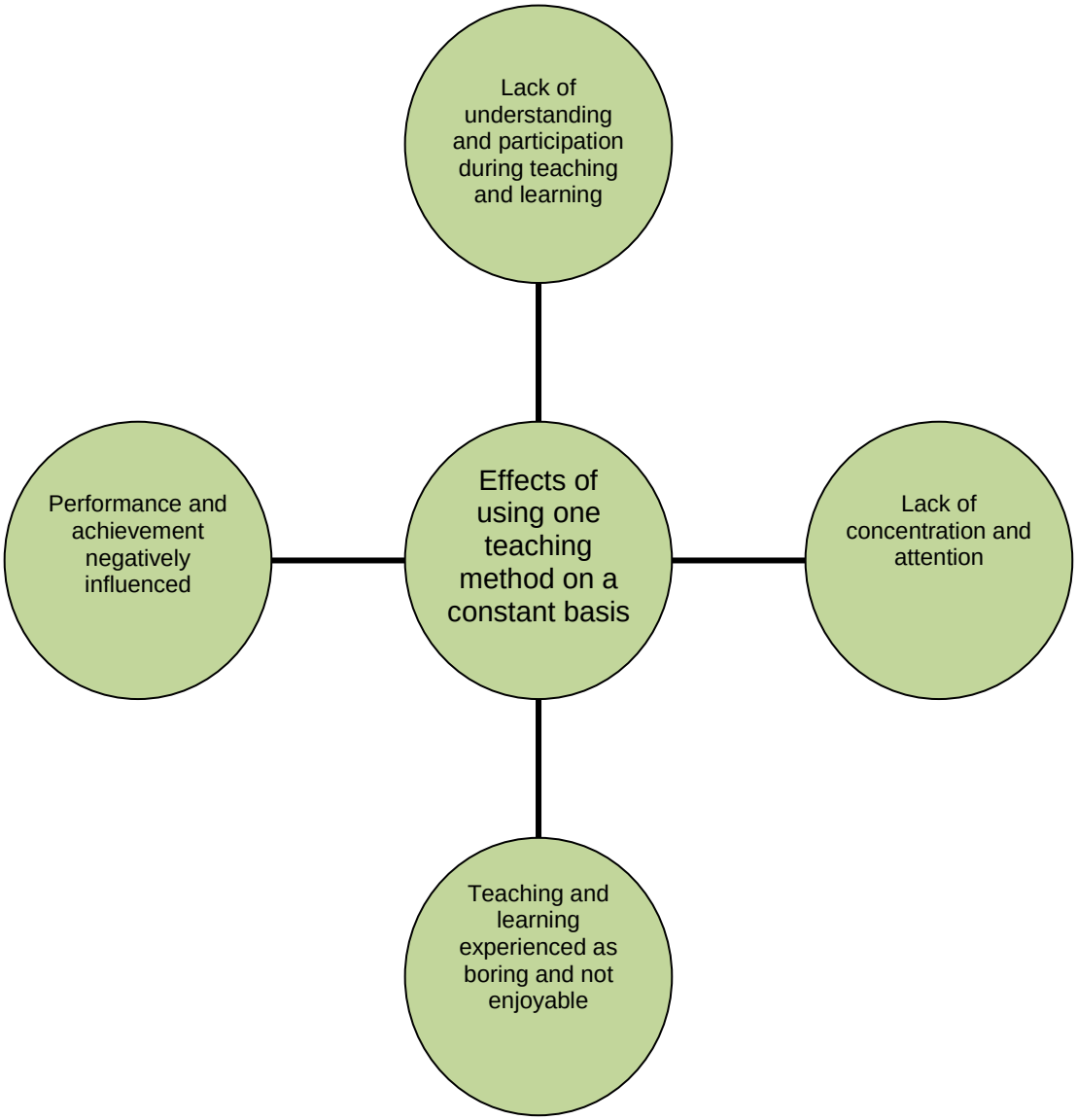
because they get bored by those who do not understand easily" (C256), *"we need to use many methods for all learners to enjoy learning"* (C257), *"one method do not accommodate all learners, others will enjoy but others will not"* (C358), *"we need to use many methods for all learners to enjoy learning"* (C359), *"one method do not accommodate all learners, others will enjoy but others will become bored"* (C360), and *"one method do not accommodate all learners, others will enjoy but others will not"* (C472). It is interesting to mention that two of the participants indicated that using the same method can also become boring to the educator: *"each educator is going to be bored"* (C52), and *"I can also be bored by using one method every time"* (C156). In support of Dunn and Giggs (2000:19) (*cf*. 3.3.2), I argue that if teaching does not make a learner feel comfortable, learning will not be experienced as enjoyable. The educators who took part in the study supported this argument. In order to feel comfortable, a learner needs to be given opportunities to learn according to his/her learner preferences.

Performance and achievement will be influenced negatively

Two educators indicated that learner performance and achievement will also be influenced negatively if learning style needs are not accommodated: *"educators are not going to move with learners"* (C51), and *"some learners.....do not perform well"* (C362). Problems with performance and achievement can, according to Lovelace (2005:176) (*cf.* 3.2), be attributed to problems with internalizing and remembering information, which occur when learning style needs are not accommodated. Furthermore, the responses of the educators concur with the arguments of Larkin-Hein (2000:2) and Dasari (2006:27) (*cf.* 1.1, 3.4), who comment that if learning style needs are not accommodated, learners will not experience success.

The responses obtained by the educators are summarized in Figure 5.4 below.

Figure 5.4: Effects of using one type of teaching method



Discussion

The educator's responses are in line with the literature, where Schraw and Olafson (2003:185) and Mahaye and Jacobs (2007:175) (*cf*. 3.6, 3.9) support the use of a variety of teaching methods and strategies to assist different learners to gain knowledge to be able to achieve expected and desired Learning Outcomes. Therefore, if one method of teaching is used constantly, learners who do not favour learning through that method could lose interest and lack motivation to learn, and might not be able to achieve the expected and desired Learning Outcomes, thus being unsuccessful (Larkin-Hein, 2000:2; Van Rensburg, 2002:136; Dasari, 2006:27) (*cf.* 1.1, 3.4). Furthermore,

Lovelace (2005:176) (*cf.* 3.2) also points out that problems with internalizing and remembering information can occur.

It appears that the educators know the negative effects of using only one teaching method, but their own teaching practice apparently does not reflect the use of a variety of methods, as evident in the responses that reflected a limited use of a variety of teaching methods and strategies in the individual classrooms (*cf.* 5.3.3, 5.3.4). The responses to question 1d did not reveal that individual educators provide flexibility in the application of a variety of teaching methods and strategies during teaching (*cf.* 5.3.4). The reasons could be that educators do not know how to use a variety of teaching methods in their practice or do not have time to plan properly. Educators might experience teaching in inclusive classrooms as challenging, due to having time constraints in terms of preparation and marking, inadequate knowledge, skills and training to implement inclusive education effectively, lack of support in managing overcrowded classrooms, and a lack of knowledge and skills to use teaching and assessment methods and strategies during teaching *(cf.* 2.3.9) (Male & May, 1997:134; Abel & Sewell, 1999:287-299; Smart, 2000:31; Swart *et al.,* 2000:77; Hay *et al.,* 2001:214; Hall, 2002:34; Harris & Schubert, 2001:54; Akintola & Quinlan, 2003:31) (*cf.* 2.4.3).

5.3.8 Data analysis: the effects of using one type of learning activity

Question 2b: What is the effect of using one type of learning activity on a constant basis?

According to the responses, the following effects could follow when educators use only one type of activity on a constant basis:

Performance and achievement will be affected negatively

The following responses emphasised the fact that using one type of activity on a constant basis will have a negative influence on learner performance and achievement:

"the clever ones will get high marks and the slow learners will score low marks" (C161), *"at the end they will not pass"* (C269), *"other will get high marks, and the other will score low marks"* (C365), *"other learners perform very well but others are struggling"* (C366), *"not all learners will perform well"* (C476), and *"the clever ones will get high marks, and the slow learners will score low marks"* (C477).

Lack of interest

The responses of the educators indicated that a lack of interest will follow if a t variety of learning activities are not provided: *"not all learners are interested"* (C162), "*not all learners are interested"* (C265), *"they are not interested"* (C268), *"learners concentrate only when they do the activities they like"* (C369), and *"not all learners are interested*" (C478).

Lack of participation during teaching

The educators were of the opinion that if a variety of learning activities is not used during teaching and learning, learner participation will be affected: *"some will participate freely then there will be that fear that others will laugh at them"* (C160), *"learners ..... do not complete those activities they do not enjoy"* (C368), and *"most become passive and do not pass their exams"* (C370).

Many of the educators shared the view that class disruptions will occur due to selective catering for the specific needs of certain learners.

Class disruptions

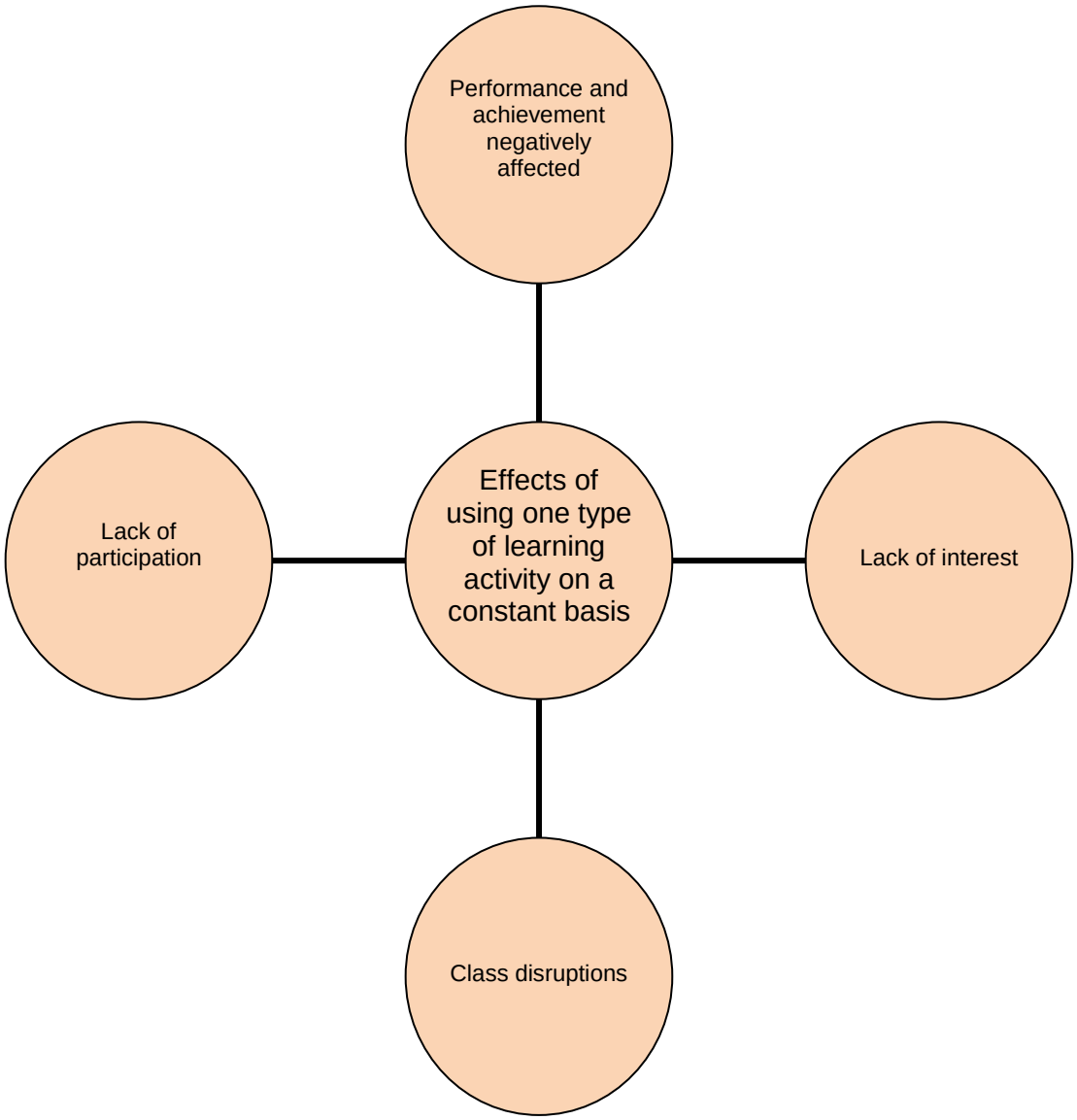
In support of the preceding theme that was identified, the educators *inter alia* responded as follows:

"the class will become disruptive because not all learners are interested" (C162), *"the learners who are idling will disrupt the class"* (C164), *"the class will become disruptive because not all learners are interested"* (C265), "*yes, you do not cater for all learners, they become disruptive"* (C266), *"the class*

will become disruptive because not all learners are interested" (C478), and *"yes, you do not cater for all learners, they become disruptive"* (C479).

The responses of the educators are summarized in Figure 5.12.

Figure 5.5: Effects of using one type of activity on a constant basis.



Discussion

Literature indicates that educators need to select and plan a variety of learning activities to accommodate diverse learners. The variety will motivate learners to perform such learning activities (Arndt & Underwood, 1990:30; Van Rensburg, 2002:179) (*cf.* 3.7). The variety of activities indicated by Sutliff and

Baldwin (2001:270) (*cf.* 3.7), appears not to be utilized during teaching and learning in the classrooms to accommodate diverse learning styles:

- Feelers/Convergers: small group discussion, specific examples, practical exercises, simulations, games and role-playing (*cf.* 3.7).
- Watchers/Divergers: creative problem-solving, personal journals, discussion groups and brainstorming, thought questions and reflecting papers, observations, (*cf.* 3.7).
- Thinkers/Assimilators: lectures, papers, analogies, model building, theory-building, questioning, (*cf.* 3.7).
- Doers/Accommodators: case studies, fieldwork, projects, homework (*cf.* 3.7).

It appears that the educators are aware of the negative effects that the use of one activity can hold, but their own teaching practice appears not to reflect the use of a variety of activities, as highlighted by the responses obtained for question 1e (*cf.* 5.3.5). The reasons could be that educators do not know the types of learning styles that exist in their classrooms, are not familiar with the types of activities that are suitable for each learning style need, or they do not know how to plan and give a variety of learning activities.

5.3.9 Data analysis: the effect of using one type of assessment method

Question 2c: What is the effect of using one type of assessment method constantly?

In response to the effects of using one type of assessment method constantly, the following themes were extracted from the responses of the educators:

Diverse and independent thinking will be discouraged

The educators among other mentioned that the learners *will "copy form each other and write the same thing even if it is right or wrong"* (C66), (C272), and *"most of them give the same answers"* (C168). If a variety of assessment

methods are used, *"they (the learners) will come up with different opinions"* (C170).

A second theme that was derived from the responses indicated that if a variety of assessment methods is not used, the quality of learner performance will be affected.

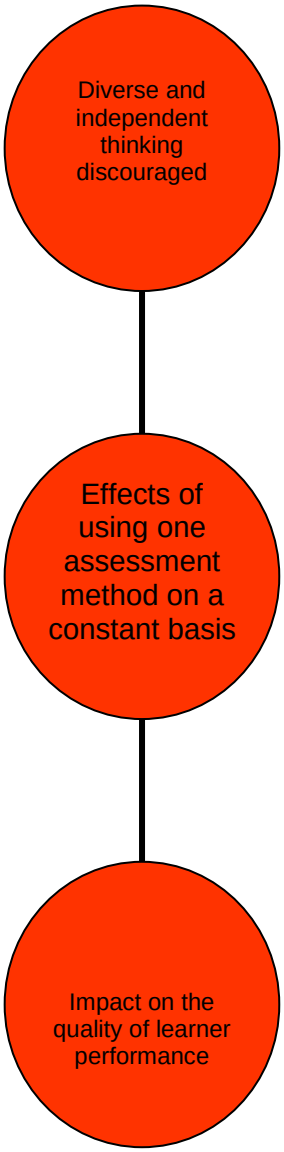
Impact on the quality of learner performance

With regard to the impact on the quality of learner performance the educator responses mentioned the following: "*some I think they pass very well while others struggle"* (C64), *"I think they will achieve if other questions are easy and others are difficult"* (C65), *"if it is too simple, those faster ones will get it done, those that are slow will take time and at least they will get something from it"* (C273), *"other learner pass very good, others really struggle"* (C373), *"the performances of other learners who are not so clever is not very good. Only the clever ones will pass"* (C375*), "other assessment methods are too difficult for other learners"* (C376), "*many learners are failing because justice is not done to them"* (C484), *"clever ones are going to pass .....others are going to fail"* (C486)

In summary, I argue that the educators are not fair towards learners if a variety of assessment methods is not used. Responses that support this view *inter alia* indicate that *"learners achieve according to their abilities"* (C277) and that it is "*not fair"* (C169) because one type of assessment *"will not cater for all learners"* (C274).

The educators' views with regard to the effects of using one type of assessment method constantly, are summarized in Figure 5.6 below.

Figure 5.6: Effects of using one type of assessment method



Discussion

Literature indicates that the effect of using one type of assessment method constantly leads to the fact that not all learners will be accommodated during assessment (SA, 2007:7) (*cf.* 3.8). To accommodate all learning styles, educators are expected to draw on various assessment methods and strategies (Cho & Forde, 2001:89; Maree & Fraser, 2004:51; Dreyer, 2008:84) (*cf.* 3.8.2).

It appears that the educators are aware of the disadvantages of not using a variety of assessment methods, but their own teaching practice does not bear

evidence of the use of a variety of assessment methods and strategies, as was noticed in the responses reported in 5.3.6. The reasons could be that educators do not know how to assess using a variety of assessment methods or do not have time to plan for a variety of assessment tasks.

5.3.10 Data analysis: using different teaching methods and strategies to accommodate diverse learning styles in inclusive Life Orientation classrooms

Question 3a: What is your opinion about using different teaching methods and strategies for diverse learning styles in the inclusive Life Orientation classroom?

The benefits of using a variety of teaching methods during teaching are evident in the responses of the educators. The following positive theme was identified among the responses of the educators:

Individualised teaching and achievement made possible

The responses of the participants revealed the following: "*it will help learners to achieve at their own levels"* (C73), *"it will cater for every learner in the class"* (C176), *"it means all learners will be catered for"* (C285), *"it's a good thing because every learner will benefit"* (C384), *"a good idea because all learners will be accommodated"* (C386), *"I think that no one will be left behind"* (C493), *"It will help learners to achieve a their own levels"* (C494), and *"it will be good since these learners are different and learn differently"* (C496).

Although the participants were positive about utilising different teaching methods and strategies in their classrooms, their responses also pointed out that employing a variety of teaching methods and strategies during teaching will bring along challenges to educators. In this regard, the following theme was identified among the responses:

Challenges in terms of workload and management

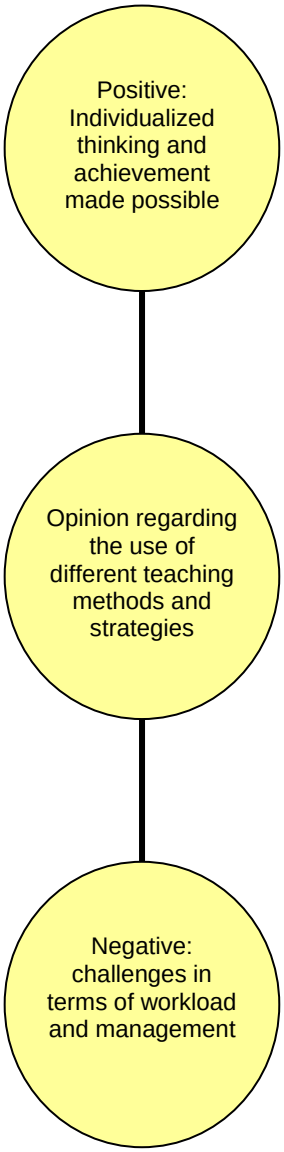
In terms of the challenges that the use of a variety of teaching methods and strategies will bring, the following viewpoints are noted: *"too much demanding.*

Put them (the learners) in one pot and cook, if you cannot cook then I overcook you" (C178), *"it is a hell of a work, we cannot manage"* (C179), "*in marking it is too much, we cannot manage"* (C180), *"it is too much"* (C200), *"it is too demanding, we have many learners and many classes"* (C281), *"too much and demanding"* (C282), *"it is a lot of work"* (C283*), "with small classes it is a good idea, not with big classes"* (C286), *"too much work ..... we have overcrowded classes, it is not simple"* (C381), *"different teaching method will take more time"* (C382), *"too much work, we cannot manage that with overcrowding classes"* (C383), *"good but too much demanding"* (C492), *"it is a hell of work, we cannot manage .....too much demanding"* (C495), and *"is a good thing, but how is it going to done with so many learners in big classes"* (C499).

In support of the use of one teaching method, one participant said: *"I think learners will be confused" (if many methods are used). One method will make them focus on what you are teaching"* (C75). This response links with the misconception highlighted by Kruger and Adams (2002:215) (*cf.* 3.4) namely, the argument to teach in the same way to avoid bias and discrimination.

A summary of the educator opinions regarding the use of different teaching methods to accommodate diverse learning styles is reflected in Figure 5.7 below.

Figure 5.7: Opinion regarding the use of different teaching methods



Discussion

According to literature, teaching methods assist different learners to gain knowledge and to achieve expected and desired Learning Outcomes (Killen, 1998:11; Mahaye & Jacobs, 2007:176) (*cf.* 3.6). If different teaching methods are not used to accommodate diverse learning styles in the inclusive Life Orientation classroom, it could lead to some learning styles needs not being accommodated and neglected (Schraw & Olafson, 2003:185) (*cf.* 3.9). Educators need to utilize accommodative teaching methods and techniques to provide quality education for all learners (Mowes, 2002:42; Uys, 2005:405) (*cf.* 2.4.1). Muthukhrishna and Schoeman (2000:315-335) and Mowes (2002:42)

indicate that one of the strategies for accommodating barriers to learning is the development of a flexible curriculum (*cf.* 2.4.1, 2.5). Based on the responses obtained, I argue that the educators who took part in the study are apparently faced with numerous challenges or lack of knowledge, skills and training to implement a flexible curriculum.

5.3.11 Data analysis: providing different activities for diverse learning style needs

Question 3b: What is your opinion about giving different learning activities for diverse learning styles in your inclusive Life Orientation classroom?

As with the previous question, a number of positive responses were received in this regard. The positive responses received related to the following theme:

Mastering of activities, better understanding, enjoyment and accommodating a variety of learner abilities

The following examples of responses that support the aforementioned theme was noted: *"learners will do the activity achieving to their abilities"* (C80), *"give expanded opportunities to those learners"* (C82), *"learners will do and master all activities"* (C185), *"learners will do the activities according to their abilities"* (C186), *"it is good it will accommodate all"* (C288), *"to benefit all learners according to their abilities"* (C291), and *"good ..... different learners will benefit from different activities"* (C392).

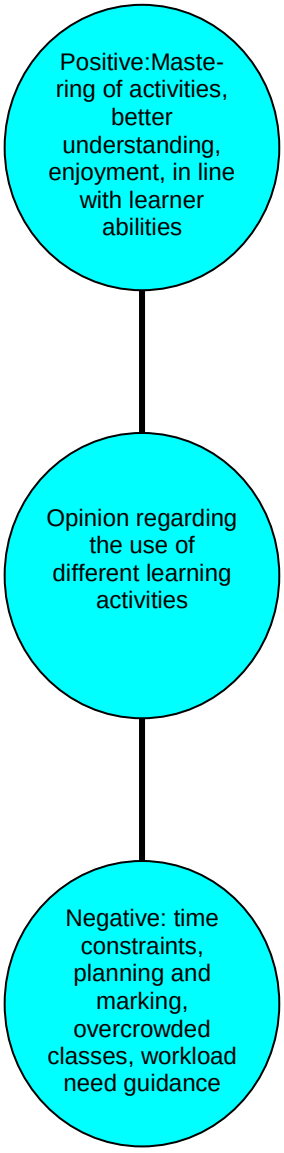
Many of the responses pointed to problems with the provision of different activities. Educators mentioned the fact that the provision of different activities bring about a lot of work and can be challenging, demanding and time-consuming. In addition to this, the task and administrative demands from the Department of Education, which educators have to fulfil, will not leave them with any time to manage different activities. Based on the aforementioned, I identified the following theme:

Challenging in terms of time constraints, planning and marking, workload increase and lack of knowledge

To support the theme, the following responses were received: *"the problem I see is that now we must plan many activities and mark many different activities, this is a lot of work we do not have time* (C81), *"it really a lot of work. We do not have time, the Department is demanding a lot from educators"* (C83), *"if now they want us to change they must show us how"* (C84), *"it is good, but yo ..... I am afraid of this is going to be a lot of work"* (C184), *"it sound good when coming to planning and marking .....it's a lot of work.....we do not have enough time"* (C187*), "it will be a good idea if they can show us how"* (C188), *"it sounds good, but when coming to planning and marking .....it's a lot of work – we do not have enough time"* (C290), *"the only thing is that the administration is also too much for us"* (C291), *"good strategy but impossible to be implemented now, unless our workload is considered, there are so many learners in the classroom"* (C293), *"it is a good thing.....our classes are so big, we do not finish marking in time what more about different activities, we will not finish"* (C295), *"giving different activities is a lot of work ....classes are too big to manage"* (C389), *"too demanding ..... too much work....no time"* (C391), *"we do not have time, we teach many classes and classes are overcrowded"* (C393), *"because of workload we are having we are unable to cater for them all"* (C500), *"overcrowding classes should be limited ..... maybe as an educator I will be able to manage these learners"* (C501), *"I will not be able to do that because it's too demanding"* (C502), *"marking such activities is demanding because of overcrowding"* (C504*), "good, but very demanding ..... not time for that"* (C505), and *"it's good, but..... not time we are already doing a lot"* (C506).

The responses of the participants are summarized in Figure 5:8.

Figure 5.8: Opinion regarding giving different learning activities for diverse learning styles



Discussion

Educators who took part in the study indicated different opinions regarding the provision of different learning activities to accommodate diverse learning styles. Some indicated that it is a good and excellent idea while others indicated that assigning different activities implies a lot of work. The literature indicates that teaching and learning environments must be organized in such a way that they enhance and provide learning activities that match the learners learning styles (Van Rensburg, 2002:179, 182) (*cf.* 3.7). In this regard, Arndt and Underwood (1990:30) and Sutliff and Baldwin (2001:270)

mention a number of activities should be utilized to accommodate diverse learning styles (*cf.* 3.7).

5.3.12 Data analysis: the use of different assessment methods and strategies

Question 3c: What is your opinion regarding the use of different assessment methods and strategies in the Life Orientation classroom?

Some of the educators were positive regarding the use of different assessment methods and strategies. Based on the responses, I identified the following positive themes:

Assessment according to ability, acknowledge the uniqueness of a learner, avoid loss of interest and lack of participation, reduce educators' workload, determine a learner's real performance and enhance learner performance and understanding

In support of the positive theme, the following responses were received: *"you will be assessing them according to their abilities"* (C90), *"good to avoid boredom, children prefer to do things differently"* (C192), *"learners enjoy different ways of doing things"* (C192), *"variety is the spice of life"* (C194), *"make them to participate. They will lose interest"* (C195), *"you will be able to know what a learner can do in different assessments"* (C294), *"educator will benefit .... marking will be less"* (C296), *"you accommodate all learners with different abilities"* (C297), "*all learners will be well assessed"* (C299), *"good idea ... learners... they learn and understand differently and answer differently"* (C397), *"it will help educators to know how learners perform using different assessment"* (C400), *"good ... to know what the learner can do in different assessment"* (C510), *"a lot of work, but for learners it is ok. They will be catered, they will benefit"* (C511), *"good, learners will feel a bit challenged and it will make them to be serious and work harder"* (C514).

Although the educators highlighted advantages of using a variety of assessment methods and strategies, their responses also pointed to some challenges that they would be faced with when varying their assessment

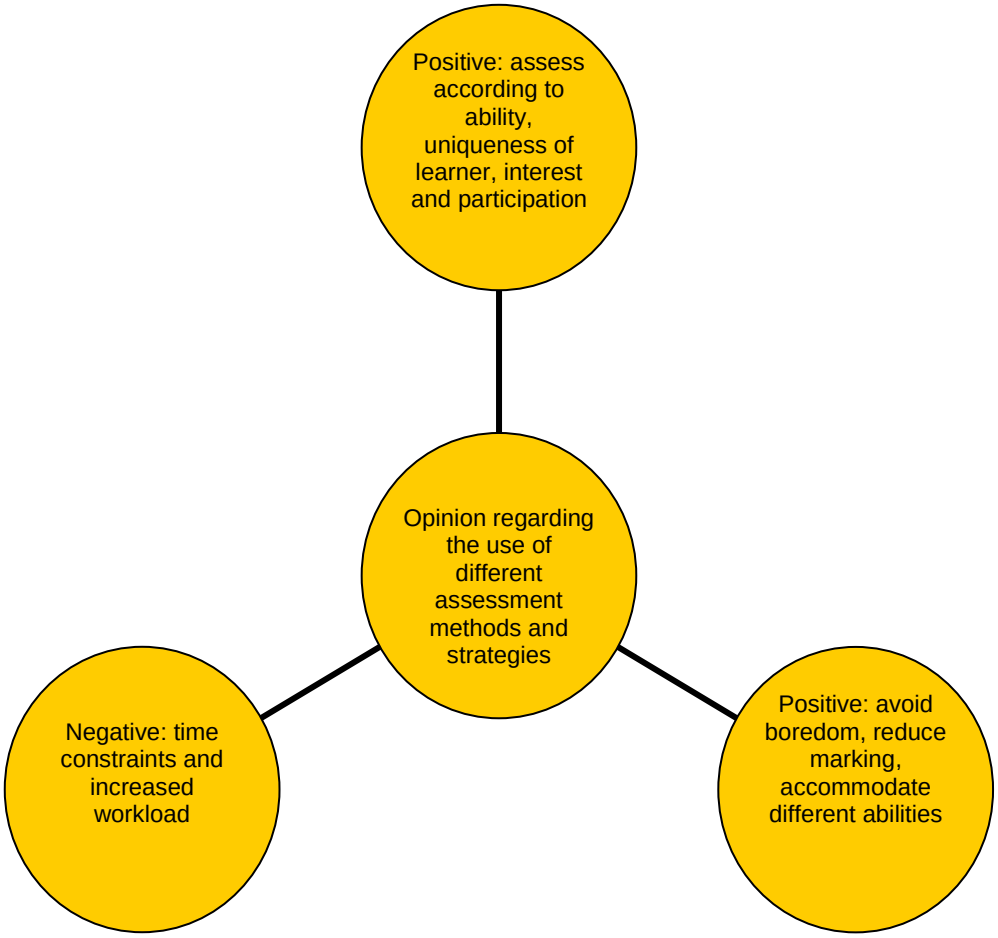
approaches. The educators mentioned work overload and a lack of time as major challenges.

Work overload and lack of time to implement a variety of assessment methods and strategies

To support the identified theme, the following responses were obtained: "*this is a lot of work, there is not time to do many assessments"* (C91), *"it is difficult as long as we can get assistance maybe we will manage"* (C92), *"it is a lot of work ... but it's a good thing"* (C196), *"it is a lot of work for the educators, but for learners it is ok ... they will be catered, they will benefit"* (C296), *"yes, but it is time consuming"* (C298), *"it's a lot of work ... but it is a good thing"* (C300), *"good idea for our learner ...I have lot of learners ...different assessment is too much"* (C398), *"a lot of work with many classes and learning areas, it is too much"* (C402), *"it is a lot of work"* (C511), and *"this is a lot of work, there is no time to do many assessments"* (C572).

A summary of the responses reported is captured in Figure 5.9.

Figure 5.9: Opinions regarding the use of different assessment methods



Discussion

The educators who took part in the study had negative and positive opinions with regard to the use of different assessment methods and strategies in inclusive Grade 4 Life Orientation classrooms. Assessment approaches need to respond to diverse learning style needs and preferences, and therefore a variety of assessment methods and strategies should be used (Maree & Fraser, 2004:51; SA, 2007:7) (*cf.* 3.8). It appears that the educators who were involved in the study still experience assessment as challenging, which could

be attributed to a lack of knowledge and skills regarding the structuring of a variety of assessment tasks.

5.3.13 Data analysis: feelings about accommodating diverse learning style needs

Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?

Only a few educators were of the opinion that accommodating diverse learning style needs is a good approach, which requires planning and preparation in order for learners to benefit. The educator responses indicated that if learning style needs are accommodated, learners would feel comfortable and accommodated, enjoy learning and participate during teaching and learning. The educators feel that accommodating diverse learning style needs is very important, because each learner can be reached according to his or her ability, and it provides opportunities to learners to learn at their own pace.

I identified the following theme from the responses.

A good approach that will accommodate and benefit all learners

In support of the positive responses, the following examples of responses received, are provided:

"good approach...everyone will benefit in the inclusive setting" (C96), *"learners will enjoy learning area and participate. I will feel happy... I would have accommodated all in Life Orientation"* (C200), *"you can reach each and every child according to his or her ability"* (C201), *"learner is going to feel comfortable and accommodated"* (C202), *"every child will benefit. They will all enjoy"* (C203), and *"that is what the Department want us to do what shall we say. We need support*" (C522).

Noteworthy, is the fact that some of the participants indicated that accommodating all learning styles will lead to educators experiencing a sense of fulfilment and freedom: *"I will feel happy...I would have accommodated all*

in Life Orientation" (C200), *"difficult for educator ...when all these learners have been accommodated ...learners have performed well at least you feel free"* (C204), *"as long as these learners can all be accommodated and work hard and achieve I feel good"* (C521).

Accommodating diverse learning styles during teaching were also viewed with caution by the educators. The educators were of the opinion that it would be time consuming, demanding and increase their already heavy workload. From their responses, the following theme was identified:

Time consuming, demanding and increasing workload

"tough ...you are having learners who can hardly read. So it is time consuming" (C97), *"yes, it is very tough"* (C98*), "difficult ...there are those who cannot read and write"* (C100), "*it is going to be a lot of work"* (C409), *"good for learners ... a lot of work"* (C410), "*I do not feel well ...it's demanding really"* (C576), *"it's too demanding"* (C577), *"maybe the number of learners in class can be reduced"* (C578), "*I do not know how to handle diverse learning style needs"* (C519), and *"will benefit all the learners ...we do not have enough time, overcrowding ...reducing the number of learners"* (C521).

In Figure 5.10, the responses of the educators are summarised.

Figure 5.10: Feeling about accommodating diverse learning styles

Discussion

Although positive responses were received that supported the literature findings of benefitting all learners and regarding them as unique (Kruger & Adams, 2002:211; Skogsberg & Clump, 2003:177; Visser *et al.,* 2006:98) (*cf.* 3.2), a number of challenges were also indicated. Factors such as time constraints, increasing present workload, overcrowded classrooms and the need for training, surfaced during the interviews. The mentioned factors are in line with the arguments in the literature regarding inadequate knowledge, lack of time, heavy workload and overcrowded classrooms that hamper the successful implementation of inclusive education (Hay *et al*., 2001:214; Hall,

2002:34; Akintola & Quinlan, 2003:31; Swart *et al.,* 2006:77) (*cf*. 2.4.3). Despite the mentioned challenges, the educators acknowledge that inclusion is based on meeting the needs of all learners (McGregor & Vogelsberg, 1998:33; Salend, 1999:114) (*cf.* 2.2.1). The educators who took part in the study appear to be challenged in developing teaching practices that accommodate individual differences (UNESCO, 1994:11-12, Udvari-Solner & Kluth; 2008:15) (*cf*. 2.2).

5.3.14 Field notes

During the interviews, the participants remained positive, and I did not detect any negativity or reluctance to respond to questions. It was clear that the participants agreed that accommodating diverse learning styles is important, but that they need support in order to provide a flexible curriculum to all learners.

In the following section, I pay attention to the data analysis for the observations.

5.4 DATA ANALYSIS FOR THE OBSERVATIONS

A discussion of the trends that were observed during the observations of five participants in three observation sessions of 30 minutes each, are discussed according to the criteria contained in the observation schedule. An example of a completed running record that was compiled during the observations, is attached in Appendix D).

Before the data are analysed and discussed a brief overview of my reflections on the classroom contexts of each of the five participants is provided. I provide an overview of the contexts to present a clear picture of the various observation contexts in terms of *inter alia* classroom atmosphere, openness, discipline, relationships and types of activities that took place, from which tendencies towards accommodating diverse learning style needs were noted.

Table 5.12: Observation context 1

Context	Observation 1	Observation 2	Observation 3
Date and time (duration)	01/09/09 (9:30-10:00) 30 min	08/09/09 (11:30-12:00) 30min	15/09/09 (9:00-9:30) 30 min
Number of learners	53	50	52
Classroom appearance	Neat and clean	Neat and clean	Neat and clean
Classroom atmosphere	Vibrant	Very quiet	Quiet, learners are working
Seating of learners	In rows facing the black board	In rows facing the black board	In rows facing the black board
Positioning of educator during teaching	At educator's table	Moving around the rows	Sitting on the table
Discipline	Moderate noise as they are working	Learners are quiet	Learners are quiet
Learner participation and involvement	Learners are reading and answering a case study activity	All learners are writing a class test	All learners are completing the class work on the worksheets given
Who is talking and who is listening/ making the decisions	The educator is talking, learners are listening and answering the questions	The educator explained some questions on the question paper.	No one is talking, learners are independently completing the worksheets
Topics or issues discussed	Children's health rights and responsibilities.	Test	Worksheet activity Children's health rights and responsibilities
Expression of feelings	Learners are excited	Some learners seem stressed, due to the test.	Some were not sure what to do, They were writing and just looking around and asking other learners what to do
Types of activities that took place	Reading of case study and answering the educator's questions on the case study in groups	Test only	Class work only: completing worksheets in groups

Context	Observation 1	Observation 2	Observation 3
Relationships in the classroom: among peers, with educator	Good relationships among peers and educator	Individual involvement in test completion	Working in groups: relationships appear to be good

In terms of the context of Observation 1, the traditional classroom set-up of learners sitting in rows for the duration of all three the observation sessions did not provide any evidence that learning style diversity was a priority in this classroom. However, the traditional seating in rows facing the black board was mainly utilised when the teacher explained work to the learners. Thereafter, groups were formed during all three the observation sessions. The classroom was very quiet, and if the educator was not talking and the learners listening, the learners were occupied individually or in groups with the completion of worksheets or writing a test. Strong educator dominance and the completion of worksheets appeared to be a factor that could hamper the accommodation of diverse learning styles in this classroom. During the second observation, a test based on the work that was completed up to so far, was given. The educator collected the test to mark.

Table 5.13: Observation context 2

Context	Observation 1	Observation 2	Observation 3
Date and time (duration)	02/09/09 (11:45 – 12:15 30 min	09/09/09 (09:00–09:30 30 min	16/09/09 (10:00-10:30) 30 min
Number of learners	62	62	60
Classroom appearance	Neat and clean. Colourful pictures on the class walls	Neat and clean. Colourful pictures on the class walls	Neat and clean. Colourful pictures on the class walls
Classroom atmosphere	Learners excited	Relaxed	Very quiet
Seating of learners	In groups of eight	In groups of eight	In groups of eight
Positioning of educator during teaching	In front of the class facing learners	Standing next to one group of learners at the door	Sitting at the educator table

Context	Observation 1	Observation 2	Observation 3
Discipline	Very disciplined, answering the educator	Some groups were not listening to what was read by other learners from other groups	Very quiet
Learner participation and involvement	Active participation by some learners. Many were just quiet.	Little participation as reading was done by one learner appointed by the educator	No active participation as the learners were writing notes from the chalkboard
Who is talking and who is listening/ making the decisions	Both learners and the educator. The educator was leading the discussions, asking questions and learners answering	Only the educator and learner who is reading from the Life orientation textbook	The educator only gave instructions and explained how notes should be taken
Topics or issues discussed	Different religions: Different church buildings Working through notes with educator on different religions	Readings from the textbook: Hindu uses Ganges River	Working through notes with the educator on children's rights and responsibilities
Expression of feelings	Learners were happy	No feeling, some learners were just looking around, not even listening to the readings	Showed concentration
Types of activities that took place	Discussions in groups	Reading from textbook	Listening to the educator's explanations and reading through notes
Relationships in the classroom: among peers, with educator	Very pleasant to both the educator and to learners among one another	Not good because some were not listening when other learners were requested to read aloud	Did not show as the activity was mainly individual note taking and listening

Initially, the learners appeared to be interested, motivated and willing to learn, which created the impression that they are comfortable in their classroom (Van Rensburg, 2002:136) (*cf.* 3.4). However, the overemphasis on group

work, listening to and reading through information provided a strong indication that diverse learning style needs might not be addressed in this classroom. Two of the sessions provided very little evidence of learner interaction during learning, and mainly involved reading, listening and note taking. The use of group work, teacher explanation and reading lead me to believe that this was the preferred way of teaching in the particular class. No evidence of assessment of learning progress was observed.

Table 5.14: Observation context 3

Context	Observation 1	Observation 2	Observation 3
Date and time (duration)	03/09/09 (10:00-10:30) 30 min	10/09/09 (10:30-11:00) 30 min	17/09/09 (12:30-13:00) 30min
Number of learners	59	62	59
Classroom appearance	Bright educational posters and pictures for different learning areas hanging and pasted on the walls.	Bright educational posters and pictures for different learning areas hanging and pasted on the walls.	Bright educational posters and pictures for different learning areas hanging and pasted on the walls.
Classroom atmosphere	Very friendly	Very exciting	Pleasant
Seating of learners	Groups of ten	Groups of ten	Groups of ten
Positioning of educator during teaching	At the centre of the class lecturing	At the educator's table	At the educator's table
Discipline	Very quiet classroom	Learners were excited watching the role-play	Very quiet
Learner participation and involvement	Very little. The learners are listening to the educators	Very active participation	Very little they are all engaged in the written work
Who is talking and who is listening/ making the decisions	Only a few individual learners who were asking clarity on some of the explanations of the educator	Learners who are performing the play, the educator assessed the role-play	The learners are listening to instructions given by the educator
Topics or issues discussed	Water safety	Road safety	Worksheet, written work

Context	Observation 1	Observation 2	Observation 3
Expression of feelings	Not apparent	Exciting	Not apparent
Types of activities that took place	Complete worksheet in groups	Role-playing	Written work: complete worksheet in groups
Relationships in the classroom: among peers, with educator	Good relationship	Very good among peers and educator	Good

As with context 2, context 3 also emphasized the use of group work. Excitement among the learners was noted in the second observation session when a role-play was utilized during teaching. The excitement provided an indication that this was an activity that was enjoyed by many of the learners. Overall, the context provided little evidence that the educators utilized a variety of teaching methods and strategies, learning activities and assessment method and strategies. The learners in the class were very quiet, and in general I did not experience a sense of excitement among the learners to engage in learning. The use of group work and the completion of worksheets in all the observation sessions created the impression that this was the preferred way of teaching in this particular class. Only during observation session 2, I observed active participation during teaching and learning. Furthermore, I did not observe any formative assessment of the learning progress.

Table 5.15: Observation context 4

Context	Observation 1	Observation 2	Observation 3
Date and time (duration)	14/10/09 (09:30-10:00) 30 min	21/10/09 (11:00-11:30) 30 min	28/10/09 (09:30-10:00) 30 min
Number of learners	45	50	52
Classroom appearance	Neat and clean Old posters pasted on the walls	Neat and clean Old posters pasted on the walls	Neat and clean Old posters pasted on the walls
Classroom atmosphere	Very noisy	Very noisy	Very noisy

Context	Observation 1	Observation 2	Observation 3
Seating of learners	Groups of six	Groups of six	Groups of six
Positioning of educator during teaching	Standing next to one group at the back of the class	Moving around the class to supervise the discussions	Seated among learners in one group
Discipline	Learners were undisciplined and made a lot of noise that disturbed the working for other groups. The educator kept on silencing them	Groups were moderately noisy but not disturbing other groups	Groups were moderately noisy but not disturbing to other groups
Learner participation and involvement	Active, but very disturbing to other groups	Active in their small groups	Active in their small groups. Very few were passive in their groups
Who is talking and who is listening/ making the decisions	Learners are talking and listening to each other	Learners are talking and listening to each other	Learners are talking and listening to each other
Topics or issues discussed	Safety	Water safety	Road safety
Expression of feelings	Some learners were angry due to the noise which disturbed their work	Some learners were impatient with other learners	Excitement among learners
Types of activities that took place	Discussion	Discussion	Discussion
Relationships in the classroom: among peers, with educator	Some learners in groups were disrespectful to the educator and their peers by continuing with the noise they made	Good relationships between the educator and learners and between the learners among one another	Good relationships between the educator and learners and between the learners among one another

A strong emphasis on group work and discussions indicated that a variety of teaching methods and strategies are not used in this classroom. I did not get the impression that the learners looked forward to what they were going to learn, and they were very noisy, disrespectful or passive when the group work was done. My feeling is that group work was definitely not the preferred way of learning among all the learners in the classroom. The use of group work and discussions appear to be favoured by the educator. No evidence of assessment of learning progress was observed.

Table 5.16: Observation context 5

Context	Observation 1	Observation 2	Observation 3
Date and time (duration)	15/10/09 (10:00-11:00) 30 min	22/10/09 (12:30-13:00) 30 min	29/10/09 (9:00-09:30) 30 min
Number of learners	47	47	44
Classroom appearance	Clean, with a few pictures and posters hanging on the walls	Clean, with a few pictures and posters hanging on the walls	Clean, with a few pictures and posters hanging on the wall
Classroom atmosphere	Very quiet	Moderate noise stemming from group discussions	Quiet
Seating of learners	Groups of six	Groups of six	Groups of six
Positioning of educator during teaching	At the educator's desk	Moving from one group to the other	At the educator's desk
Discipline	Well disciplined	Controllable	Well disciplined
Learner participation and involvement	Little participation –they were all engaged in the written work	Some were active in their group, a few were passive	Little participation - they were all engaged in the written work
Who is talking and who is listening/ making the decisions	Only the educator who presents information before the discussions took place	Only the educator who presents information before the discussions took place	Only the educator who presents information before the discussions took place
Topics or issues discussed	Children's rights and responsibilities	Children's rights and responsibilities	Children's rights and responsibilities
Expression of feelings	Not apparent	Learners seemed to enjoy the discussions	Not apparent
Types of activities that took place	Worksheet completion in groups	Discussion in groups	Worksheet completion in groups
Relationships in the classroom: among peers, with educator	Good	Good	Good

In terms of the context of Observation 5, I once more noticed a strong emphasis on the use of group work and the completion of worksheets. During my observations, I noticed that not all learners in the groups were actively

involved in the completion of the worksheets, which could be an indication that not all learners in the classrooms enjoyed working in groups on a constant basis. The use of group work and discussions once more appeared to be the teaching strategies favoured by the educator. No evidence of the use of assessment tasks to monitor learner progress was observed.

In the following section, I report on the results of the observations according to the various sections in the observation schedule (*cf.* Appendix D)

In terms of the data collection and analysis during the observations, the following principle played a guiding role. In line with the viewpoint of Kolb (1984:199), I looked for evidence that would support the fact that in achieving lesson outcomes, educators' teaching practice should provide evidence that learners are guided through a cycle of learning, which comprises concrete experience, reflective observation, abstract conceptualization and active experimentation over the two-week observation period. Educators were requested to deal with a particular Assessment Standard over the two-week observation period, as I did not expect that educators have to accommodate diverse learning styles on a daily basis during their Life Orientation periods, but during the learning process towards achieving a particular Assessment Standard related to a Learning Outcome. The educators were comfortable with the arrangement of dealing with one Assessment Standard as part of a Learning Outcome over two weeks.

5.4.1 Observation: Learning styles

Criterion 1: Is the educator aware of diverse learning styles?

Based on the observations, I identified the following theme.

Accommodating learners through active involvement, reflective observation and sensory experiences

It appears as if the educators who were observed are not aware of the diverse learning styles, because all three the observation sessions for all five

educators a strong emphasis on the use of group work, discussion, listening to educator explanations and the completion of worksheets was observed. In two of the observation contexts a case study and role-play were used, respectively, which possibly created the observed excitement among the learners. (*cf.* Tables 5.12-5.16). Based on the aforementioned, I conclude that mainly Interactive, Indirect and Direct Teaching Methods were utilized by the educators, which mainly accommodate Accommodators (Doers), Divergers (Watchers) and Convergers (Sensors/Feelers) who prefer to learn through active experimentation, reflective observation and sensory experience (*cf*. Tables 3.6, 3.7). I could not find any evidence of opportunities provided to learners for abstract conceptualization and independent thinking. Based on my observation, I conclude that teaching and learning according to the complete learning cycle (sensory experience, reflective observation, abstract conceptualization and active experimentation), (Kolb, 1984:199; Felder, 1996:18), has not yet become a reality in the classrooms that were involved in the research.

In addition to the aforementioned, the classroom practices of the educators who were observed appear not to be in line with what literature reveals, namely that human beings are not the same. They are unique, individual and different. Therefore, learners learn differently according to different styles, which educators have to accommodate (Kruger & Adams, 2002:21; Skogberg & Clump, 2003:77; Visser *et al.,* 2006:98) (*cf.* 3.2). I argue that if the educators who took part in the study do not accommodate all learning styles, it could lead to learners not being motivated and unwilling to learn (Van Rensburg, 2002: 136) (*cf.* 3.4). Some signs of learner passivity (*cf.* Tables 5.12, 5.14) and disturbances (*cf.* Table 5.15) were noted in some of the observation contexts, which could point to the fact that learners might be bored and frustrated with inefficient learning processes (Van Rensburg, 2002:136) or experience discomfort, which will interfere with their learning (Felder, 1996:18) (*cf.* 3.4).

Reflective notes

Based on the nature of teaching and learning activities offered to the learners, I wondered whether the educators purposefully utilize methods and strategies with which they feel comfortable with, or whether they are not aware of how to teach in order to address learning style diversity.

5.4.2 Observation: Teaching methods and strategies

Criterion 1: Which teaching methods and strategies does the educator use?

Linked to the observations, I derived at the following major theme in relation to the teaching methods and strategies used by the educators.

Neglecting independent teaching and learning

All five educators used mainly three teaching methods, namely **Direct** (lecture, explanations), **Indirect** (discussion, role-play, case study), and **Interactive** Teaching Methods (group work – completion of worksheets) (cf. Table 5.12 – 5.16). The use of the Independent Teaching Method for learners who prefer to learning by thinking through information on their own (Assimilators/Thinkers), seem to be underutilized in the classrooms that took part in the research.

The educators, who mainly use the Direct Teaching Method, deprive other learning styles (Accommodators (Doers) and Assimilators (Thinkers) of meaningful learning. This method holds disadvantages, as it does not accommodate/cater for diversity among learners and does not foster social and interpersonal skills development, due to its limited opportunities for learner activity (Killen, 1998:4-6; Kramer, 2006:100) (*cf.* 3.6.1).

Furthermore, the Direct Teaching Method provides limited opportunity for problem-solving, creativity, explanation and enquiry (Killen, 1998:4-6; Monyai, 2006:107-112; Arends, 2009:290-295) (*cf*. 3.6.1). In the classes where Indirect and Independent Teaching Methods were not used, learners may be denied the benefits of the method that *inter alia* refer to involvement in

learning and active participation (Kramer, 2006:101) (*cf*. 3.6.2). This method also has a high potential for building higher order thinking skills and provides opportunities for personal and independent inquiry, which the Assimioator (Thinker) favours (Kramer, 2006:101) (*cf.* 3.6.2). An overemphasis on the use of this method can disadvantage learners who like systematic learning (*cf.* Felder, 1996:20) (*cf.* 3.3.5).

According to Killen (1998:64), an overemphasis on the use of the Interactive Teaching Method can lead to some learners relying heavily on others because they do not favour independent and individual-centred instruction (*cf.* 3.6.4). This method, however, holds numerous advantages for learners who like to learn independently (Assimilators/Thinkers) and enjoy expressing opinions and sharing information with others (Accommodators/Doers) (Du Plessis *et al.,* 2007:30) (*cf*. 3.6.4).

Educators need to utilize accommodative teaching methods and techniques to provide quality education for all. If educators do not ensure that all learners are accommodated through their teaching methods, then an inflexible curriculum that leads to learning breakdown will become a barrier to learning (Muthukrishna & Schoeman, 2000:315-335; SA, 2001:47; Swart & Pettipher, 2005:18) (*cf.* 1.1, 2.5).

Discussion was used as a teaching strategy in four of the classes that I observed (*cf.* Tables 5.13 – 5.16). Two educators frequently made use of worksheets (*cf.* Tables 5.14, 5.16) and reading of information was done in two classes (*cf.* Tables 5.12, 5.13). Listening to educator presentations and explanations (*cf.* Tables 5.12 – 5.14), note-taking, case studies, class tests, role-play and written work were also done in different classes (*cf.* 5.2). It appears that learning through questioning, field trips, presentations by visitors, debates, making posters, experimenting, crossword puzzles, projects, constructing concept maps, designing and making, demonstrations by learners, surveys, oral presentations by learners, drilling, brainstorming, video, film, tape, radio presentations, interviews were underemphasized by the educators who took part in the study.

This observation is not in line with what the literature indicates, namely that teaching strategies should be linked well with the various learning style needs of learners (Killen, 1998:11, Mahaye & Jacobs, 2007:175, 176, Schraw & Olafson, 2003:185) (*cf*. 3.6). Furthermore, the goal and purpose of inclusion, namely to contribute towards the development of an inclusive society where members of society can fulfil their potential and participate optimally, might not be achieved (SA, 2001:6, 7; Babane, 2002:13) (*cf.* 1.1).

Based on the observations obtained, it appears that not all five educators who were observed over the two-week period used a variety of teaching methods and strategies during teaching.

Reflective notes

In all three of the observation sessions, all five educators appear to use the same methods and strategies constantly in their classrooms without varying their teaching methods to achieve the outcomes that were set for the specific lesson. My observation left me with a number of unresolved issues:

- I wonder if the educators prefer these methods and are comfortable with their application.
- I also wonder if they might lack knowledge regarding the suitability and application of other teaching methods and strategies.
- I wonder if educators are knowledgeable on how to adapt their teaching according to learner preferences

5.4.3 Observation: Learning activities

Criterion 1: Which learning activities do the educators use in the classroom?

Based on the observations, I identified the following theme in relation to the learning activities that educators use in their classrooms.

Focus on active involvement and neglecting independent work

As mentioned in 5.4.2, discussions were used in four of the classes (*cf.* Tables 5.13 – 5.16). Two classes used worksheet completion, reading was also done in two classes, listening to educators presentations was observed in three classes and note-taking (*cf.* Table 5.13), case studies (*cf.* Table 5.12), class tests (*cf.* Table 5.12) and role-play (*cf.* Table 5.14) were also done in some of the individual classrooms (*cf.* 5.2). According to my observations, the educators mainly employed teaching strategies that prompted the use of learning activities that focus on active involvement during learning and neglected activities that promote independent work, communication of information and interpreting information.

It seems as if Assimilators (Thinkers) who enjoy learning processes that involve sorting and classifying information, interpreting information and questioning information, are not accommodated in the classrooms that took part in the research (*cf.* Table 6.5). Convergers (Sensors/Feelers), Divergers (Watchers) and Accommodators (Doers) benefited minimal through the use of worksheet completion, reading, note-taking, case studies, class tests, role-play that called for sensory experience in collecting of information, recording of information and performing practical activities (*cf.* Table 6.5). The provision of learning activities appears not to support the literature, where it is argued that the teaching and learning environment must be organized in such a way that it provides learning activities that match learning styles of all learners (Sutliff & Baldwin, 2001:270; Van Rensburg, 2002:179) (*cf*. 3.7). It can be argued that the educators did not maximize the participation of all the learners to make learning comfortable and enjoyable (Dunn & Giggs, 2000:19) (*cf.* 3.2).

Reflective notes

The educators did not vary their activities, but repeated the same activities in all three the observation sessions and therefore did not accommodate all learners. I have a feeling that they might not be aware of the diverse learners in their classrooms or they do not know which activities best suit the various learning style needs in their classrooms.

5.4.4 Observation: Assessment methods and strategies

Criterion 1: Which assessment methods and strategies does the educator use for assessment in the classroom?

I derived the following theme from the observations.

Separating teaching, learning and assessment

Based on my observations, I concluded that the educators who took part in the study seem to separate teaching, learning and assessment, as I only observed evidence of assessment in one of the classrooms where a test was written (*cf.* Table 5.12). The educators' choice of assessment approaches are not in line with what literature indicates, namely that educators must use a variety of assessment strategies in the classroom to continuously monitor learner progress (Maree & Fraser, 2004:51: Marnewick & Rouhani, 2007:268, 269) (*cf.* 3.10.4)

The educators paid no attention to establish whether the learners understood what was done with them on a daily basis. Although discussions took place in groups, and worksheets were completed in groups, no feedback was requested from the learners to establish the quality of their discussions or answers. The educator, without any learner involvement in the assessment, also informally assessed the role-play that was done in one of the classrooms. I argue, that the educators could have made good use of peer and group assessment to determine the learners' progress during the completion of the worksheets and discussions. One of the educators made use of an objective test (*cf.* Table 5.12). Convergers (Sensors/Feelers) and Divergers

(Watchers) are best accommodated by using this strategy since their learning preferences rely on intuitive and perceptive observation (*cf.* Maree & Fraser, 2004:51) (*cf.* 3.8.2; Table 6.4). Objective assessment by means of a test will exclude Accommodators (Doers) and Assimilators (Thinkers) who favour practical demonstration and interpretation as well as application of higher-order thinking such as analysing and evaluating, respectively (*cf.* Table 6.5).

The implication of the aforementioned practice is that Assimilators (Thinkers) who will enjoy self-assessment, Accommodators (Doers) who will enjoy becoming involved in peer assessment, and Convergers (Sensors/Feelers), Divergers (Watchers) and Accommodators (Doers) who will be comfortable with group assessment are denied opportunities to become involved in the assessment of their own learning (*cf.* Table 6.4).

Based on my observations, I also conclude that the assessment approaches in the classrooms that took part in the research appear not to reflect a balanced approach regarding the use of assessment of learning and assessment for learning (Chappius & Stiggins, 2002:40-43; Stiggins, 2002:759,761; Davies & Waverly, 2005:1) (*cf.* 3.8.1, 3.8.2). On the other hand, I acknowledge that the nature of the teaching and learning might have been such that assessment took place during the sessions in which I did not conduct the observations were not done. I however argue that it remains important to assess whether learners have achieved what was done with them on a daily basis, informally. For this purpose peer, self and group assessment can be used.

Assessment approaches need to respond to diverse learning style needs and preferences, and therefore a variety of assessment methods and strategies should be used (SA, 2007:7) (*cf.* 3.8). It appears that educators in the study still experience a challenge in dealing with assessment that accommodates all learning needs and possibly lack knowledge and skills on how to provide variety during assessment.

Reflective notes

My reflection on what I observed regarding the use of assessment methods and strategies, leads me to believe that the educators apparently do not regard assessment as integral to teaching and learning, and possibly do not know which assessment methods and strategies are suitable for the different learning style preferences of the learners in their classrooms.

5.5 ADDITIONAL THEMES EMERGING FROM THE DATA ANALYSIS OF THE FOCUS GROUP INTERVIEWS AND THE OBSERVATIONS

Besides the themes that were identified from the interview responses and the running records of the observations, the following themes can be listed as important additional themes that emerged from the interview responses and the observations.

Inadequate knowledge pertaining to the implementation of the Inclusive Education Policy (White Paper 6)

The interview responses and observations indicated that the educators appeared not to be clear in terms of what the policy expects with regard to providing a flexible curriculum to learners. Furthermore, divergent and incomplete perspectives emanated from the interview responses regarding what diverse learning styles are and how they should be accommodated through the choice of teaching methods and strategies, learning activities and assessment methods and strategies (*cf.* 5.3.1 – 5.3.6, 5.4.1 – 5.4.4).

In addition to the aforementioned, the educators also appear to have inadequate knowledge regarding the importance of teaching with diverse learning styles in mind in order to enable all learners to achieve the Learning Outcomes. In this regard, the educators' responses and teaching practice did not indicate that they are aware of the experiential learning cycle that call for teaching to make provision for sensory experience, reflective observation, abstract conceptualization and active experimentation among all learners (Kolb, 1984:199) (*cf.* 3.3.13).

Absence of continuous assessment

The assessment approaches of the educators who took part in the study are not in line with what the assessment policy indicates, namely that assessment should be summative, continuous and formative (SA, 2007:7; Marnewick & Rouhani, 2007:268, 269) (*cf.* 3.8). Continuous, formative assessment appears to be absent in the classrooms that were involved in the research. During the two-week observation period, the educators focussed on achieving a particular Assessment Standard related to a Learning Outcome. Only once, did one of the educators make us of a test to establish whether learners acquired the lesson outcomes of a particular lesson.

Challenges in terms of learner numbers

What I noticed during the observations is large learner numbers (between approximately 40 and 60 per classroom) in the classrooms of all the educators who took part in the research. Linked to the interview responses, which reported learner numbers as a challenge in implementing a flexible curriculum to learners (*cf.* 5.3.13), the observations confirmed the reported challenge

In the following section, I triangulate the findings obtained from the focus group interviews and the observation, in order to provide a thick description of the Life Orientation classroom contexts in terms of the accommodation of learning style needs.

5.6 TRIANGULATION OF THE INTERVIEW AND OBSERVATION DATA

The main trends that emerged from the interview and observation data were used to write a composite. The composite integrates the findings obtained from the focus group interviews and observation data.

Understanding diverse learning styles

According to the interview responses, it appears that the educators who took part in the study understand learning style needs very differently (*cf.* 5.3.1). Furthermore, the understanding appears to be incomplete and limited to *inter alia* learners with different abilities and intelligences, learners being classified

as fast and slow learners, introverts and extroverts and good and poor performers (*cf*. 5.3.2). The focus group interview responses also revealed misconceptions regarding the understanding of learning styles, such as categorizing learners as fast and slow, with Watchers being the slow learners, Doers being average to slow and Thinkers being the fast learners. The understanding of the educators that transpired from the interview data does not provide convincing evidence that all of the educators who took part in the study understand what diverse learning styles imply.

My observations supported the findings obtained from the interview data. I also concluded that the educators do not clearly understand what learning styles refer to, as teaching and learning mainly comprised active involvement, reflective observation and sensory experiences across the different classrooms, implying that mainly Convergers (Sensors/Feelers), Divergers (Watchers) and Accommodators (Doers) were accommodated during teaching (*cf.* 5.4.1). The interview and observation data point to gaps in the educators' understanding of leaning style diversity being linked to various factors, such as perceptual preference, emotional and sociological factors, levels of dependency and task functioning in the brain (*cf.* 3.3.13).

The limited understanding of diverse learning styles give rise to my concern, namely that if the educators do not know or understand learning styles and are not aware of them, they will not be able to accommodate them all and in a balanced way. One of the goals and purposes of inclusive education will therefore be defeated, namely developing all individuals in society to their full potential (SA, 2001:6) (*cf.* 2.3.3.5).

Teaching methods and strategies

Both the interview and observation data support the fact that the educators do not utilize a variety of teaching methods and strategies to accommodate diverse learner needs.

The interview responses indicated that the educators who took part in the study do not use a variety of methods in their inclusive classrooms. In particular, the educators indicated that Interactive Teaching by means of

group work and mixed ability grouping accommodates diverse learning style needs (*cf.* 5.3.3, 5.3.4). Furthermore, the responses *inter alia* indicated the use of strategies such as discussions, group activities, lectures and questioning (*cf.* 5.5.5, 5.3.4). Although the mentioned strategies reflect a variety that accommodates all learning styles, the application of the variety was reported across the classrooms and not in the individual classrooms that took part in the research. The focus group interview responses indicated that the educators who took part in the study are not exactly sure which methods best suit which learning style. Educators appear to mismatch the learning styles and the teaching methods and strategies (*cf.* 5.3.3, 5.3.4).

The observation data supported the focus group interview data by revealing that the educators used mainly three teaching methods (Direct, Indirect and Interactive Teaching Methods). Throughout the observations a limited and frequent use of a few teaching strategies were observed, namely discussions, worksheet completion in groups, lecturing, role-play and case study (*cf.* 5.4.2). Overemphasis on the use of Interactive Teaching by means of group work was noted in the interview responses and during the observations (*cf.* Table 5.17).

Learning activities

Regarding the provision of learning activities, it was clear that the educators know of different types of activities to be used in their classrooms, but that variety appears to be provided across the classrooms and not in individual classrooms. The interview responses revealed that the educators seem to experience challenges in matching the activities with suitable learning styles (*cf.* 5.3.5). The interview responses revealed that the educators mainly use independent (homework, assignments, projects, research), interactive (debates, role-play, discussions) and practical activities (poster making, collages), that mainly accommodate Assimilators (Thinkers), Accommodators (Doers) and Convergers (Sensors/Feelers) (*cf.* 5.3.5).

In support of the focus group interview findings, the observations also revealed that educators employed the same activities in all their observed

lessons with little variation (*cf.* 5.4.3). The preferred activities appeared to be discussions, completing worksheets in groups, role-play, case studies and presentations by the educators, which mainly accommodate the Convergers (Sensors/Feelers), Divergers (Watchers) and Accommodators (Doers). In support of Arndt and Underwood (1990:30), Sutliff and Baldwin (2000:270) and Van Rensburg, (2002:179), I am of the opinion that if educators do not vary their activities and match them according to learning styles, this could lead to poor performance by learners whose preferred learning styles are not met.

Assessment methods

The interview responses revealed that even though educators know the different assessment methods, it appeared as if they were not able to match the learning styles with suitable assessment methods. The interview data indicated a mismatch between assessment methods and learning styles (*cf.* 5.3.6). Educator assessment, by means of tests and exams, and self-assessment appear to be the most frequently used methods of assessment in the classrooms that took part in the study (*cf.* 5.3.6), and mainly accommodates Convergers (Sensors/Feelers), Divergers (Watchers) and Assimilators (Thinkers) (*cf.* Table 6.4).

In practice, during the observations, only one educator made use of a test to assess learners' progress. In general, the educators appeared to separate teaching, learning and assessment, as no evidence of formative assessment of the learners' progress towards the attainment of lesson outcomes were observed. Self-assessment and peer assessment were totally neglected by all the educators (*cf.* 5.4.4). It appears that the educators are challenged in structuring assessment activities for diverse learning styles.

Both the focus group interview and observation data provided evidence that a balanced application of assessment for learning and assessment of learning apparently (*cf.* 3.8.1, 3.8.2) are not yet part of the instructional practices of the educators who took part in the study (*cf.* 5.3.6, 5.4.4)

In Table 5.17 below, I summarize the findings that transpired from the focus group interview data and the observations.

Table 5.17: Summary of data obtained : focus group interviews and observations

	Focus group interviews	Learning styles accommodated	Observations	Learning styles accommodated
Awareness/under-standing of learning style needs (*cf*. 5.3.1, 5.3.2, 5.3.3)	Abilities, intelligence, individual ways of learning, personality types, tempo with which information is processed, levels of achievement, adapting difficulty level of the work Learning styles depend on the task given	Incomplete knowledge about learning styles Misconceptions: fast and slow learners Watchers: slow learners Doers: average to slow learners Thinkers: fast learners	Classroom contexts revealed limited evidence of teaching that accommodated diverse learning styles (*cf*. Tables 5.12-5.16) (*cf.* 5.4.1)	Apparent unawareness of diverse learning style needs Accommodate learners through active involvement, reflective observation and sensory experiences
Teaching methods and strategies used (*cf*. 5.3.3, 5.3.4)	Methods: Interactive (group work and mixed ability grouping0 Strategies: discussions, group activities, lectures, questioning	Accommodators (Doers) Divergers (Watchers) Convergers (Sensors/Feelers) Divergers (Watchers)	Methods: Interactive, Direct, Indirect (*cf.* 5.4.2) Strategies: discussion, work sheet completion, lecture, role-play, case study	Accommodators (Doers) Convergers (Sensors/Feelers) Divergers (Watchers)
Learning activities provided (*cf.* 5.3.5)	Independent work: homework, assignments, projects, research Interactive work: debates, role-plays, discussions Practical activities: poster making, collages	Assimilators (Thinkers) Accommodators (Doers) Convergers (Sensors/Feelers)	Interactive: discussions, group completion of worksheets, case studies Direct: listening to educators presentation, note-taking Sensory experiences: role-play (*cf.* 5.4.3)	Focus on active involvement and neglecting independent work Divergers (Watchers) Accommodators (Doers) Convergers (Sensors/Feelers)
Assessment methods and strategies used (*cf.* 5.3.6)	Educator assessment: tests, exams Self-assessment To a lesser extent peer, group and performance-based assessment	Convergers (Sensors/Feelers) Assimilators (Thinkers) Divergers (Watchers)	Educator assessment:test No self, peer, group or performance assessment (*cf.* 5.4.4)	Convergers (Sensors/Feelers) Divergers (Watchers) Separating teaching, learning and assessment

5.7 CHAPTER SUMMARY

This section focused on the analysis and interpretation of data (*cf.* 5.3).The data analysis clearly indicated that learning style needs are not accommodated effectively in the classrooms that took part in the study (*cf.* 5.3, 5.4). This observation could be attributed to a lack of knowledge regarding how to plan for instruction that accommodate diverse learning needs, heavy workload, time constraints and overcrowded classrooms that make it difficult to pay attention to structuring a flexible curriculum (*cf.* 5.3.13).

Educators appear to be aware of the positive effects and advantages of using a variety of teaching methods and strategies, different learning activities and assessment methods and strategies. The educators noted improved achievement and performance, increased interest, participation and enjoyment as well as better understanding and avoiding disruptions in class as some of the positive effect that using a variety of teaching and strategies, learning activities and assessment approaches can have (*cf*. 5.3.7- 5.3.9). However, my observations did not reveal a commitment from the educators to make the awareness of the advantages of accommodating diverse learning style needs visible in their classrooms (*cf.* 5.4.1 – 5.4.4).

The following chapter, Chapter 6, focuses on a teaching and learning programme that intends to link teaching methods, learning activities and assessment methods to learning styles during the teaching and learning of Life Orientation in Grade 4, based on the outcomes of the empirical study.

CHAPTER 6

A TEACHING AND LEARNING PROGRAMME TO ADDRESS LEARNING STYLE DIVERSITY IN AN INCLUSIVE GRADE 4 LIFE ORIENTATION CLASSROOM SETTING

6.1 INTRODUCTION

The previous chapter identified several problems related to accommodating diverse learning styles in the teaching of Life Orientation in Grade 4. This prompted me to design a guiding document in the form of a curriculum-based teaching and learning programme for Grade 4 educators of Life Orientation that could assist them, against the background of mentioned time constraints and work overload (*cf.* 5.3.10 – 5.3.13) in accommodating diverse learning style needs. The teaching and learning programme provides examples how to vary teaching methods and strategies, develop different learning activities and employ different assessment methods that best suit diverse learning style needs.

This chapter intends to give basic guidance to Grade 4 educators of Life Orientation regarding generic principles, components and processes that could be included in a teaching and learning programme that will accommodate diverse learning style needs. I concluded from the data analysis, that the educators appear not to be aware of the different learning style needs of learners and what they entail (*cf*. 5.4.1, 5.3.1, 5.3.2). Furthermore, to enable learners to become acquainted with their own learning preferences, the following section provides a practical explanation of how to identify and become acquainted with the spectrum of learning needs in classrooms.

6.2 DETERMINING LEARNING STYLE PREFERENCES

The learning style inventory, developed by Kolb (1981), describes the way one learns and deals with day-to-day issues.

The first part of the learning style inventory requests the learner to complete 12 sentences, which each has an ending. The learners need to rank the endings for each sentence according to how well the ending fits their individual way for going about or learning something. The endings are ranked on a four-point scale, where 1 implies "*the least like you*", 2 indicates that the statement is "*third most like you",* 3 implies *"second*

most like you" and 4 indicates *"most like you".* The rankings for all the statements in each column are added together.

Table 6.1 indicated the twelve statements of the learning style inventory.

Table 6.1: Learning Style Inventory Statements (Kolb, 1981)

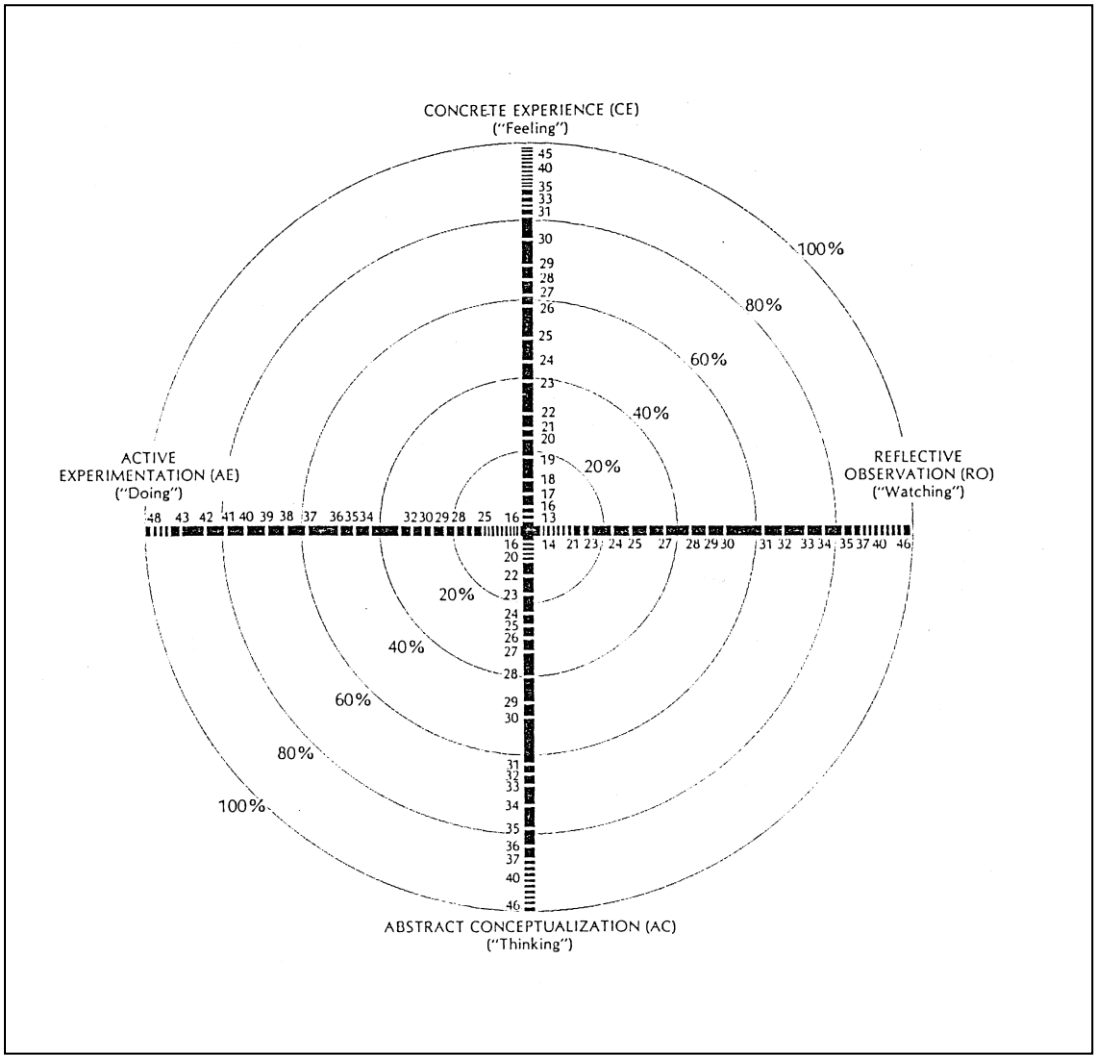
Sentence	Endings of sentences			
When I learn	I like to deal with my feelings	I like to watch and listen	I like to think about ideas	I like to be doing things
I learn best when	I trust my hunches and feelings	I listen and watch carefully	I rely on logical thinking	I work hard to get things done
When I am learning	I have strong feelings and reactions	I am quiet and reserved	I tend to reason things out	I am responsible about things
I learn by	Feeling	Watching	Thinking	Doing
When I learn	I am open to new experiences	I look at all sides of issues	I like to analyze things	I like to try things out
When I am learning	I am an intuitive person	I am an observing person	I am a logical person	I am an active person
I learn best from	Personal relationships	Observation	Rational theories	A chance to try out and practice
When I learn	I feel personally involved	I take my time before acting	I like ideas and theories	I like to use results from my work
I learn best when	I rely on my feelings	I rely on my observations	I rely on my ideas	I can try things out for myself
When I am learning	I am an accepting person	I am a reserved person	I am a rational person	I am a responsible person
When I learn	I get involved	I like to observe	I evaluate things	I like to be active
I learn best when	I am receptive and open-minded	I am careful	I analyse ideas	I am practical

Total the scores	Column1:	Column 2:	Column 3:	Column 4
	CE	RO	AC	AE

Each of the columns relate to the four stages in the learning cycle. In this cycle, as depicted in Figure 6.1, are four learning modes or learning preferences: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE) .

The scores for each of the columns are placed on the lines in the figure below. Then the dots are connected to form a kite like shape. The shape and placement of the kite will indicate which learning modes are preferred the most and which are preferred the least.

Figure 6.1: The learning cycle (Kolb, 1981)



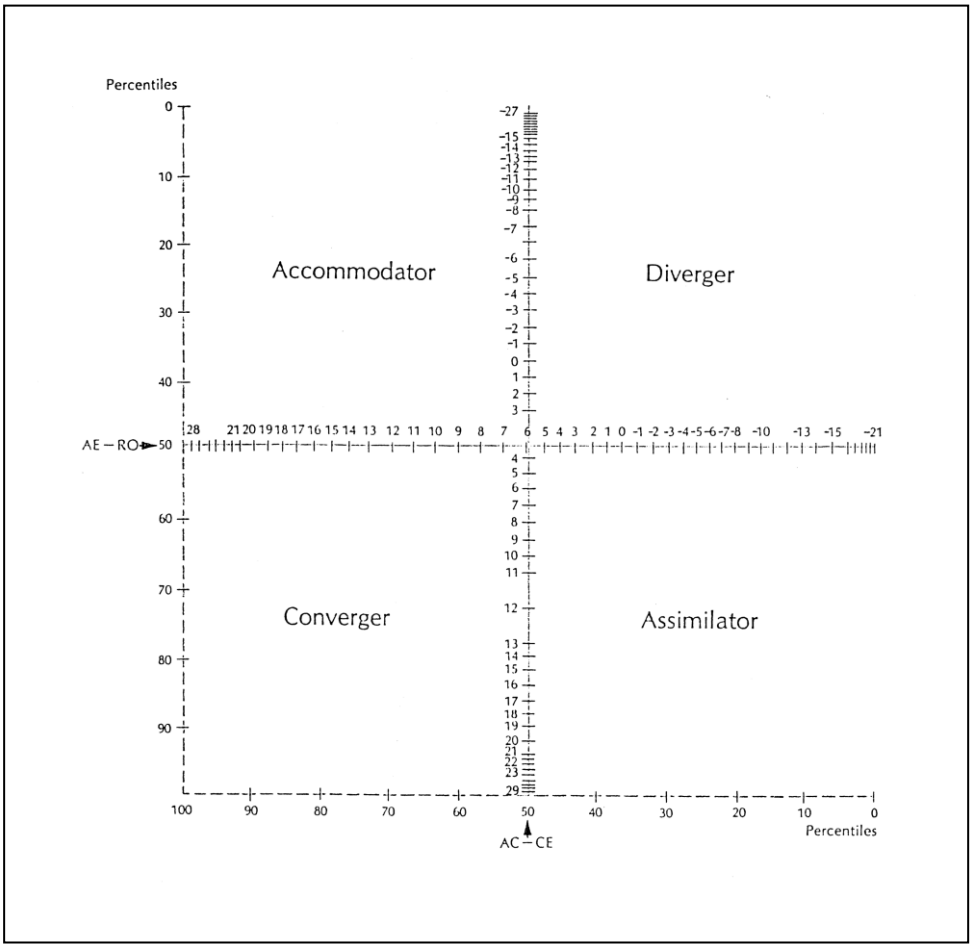
This exercise will enable learners to understand their own strengths and weaknesses. An important fact to remember is that effective learning requires involvement in each of the stages. Irrespective of the preferences that a learner has, learning requires that learners need to be exposed to all four stages to achieve Learning Outcomes. Learners therefore have to be able to learn in all the different modes.

The next step requests of learners to take each of the scores for the four individual learning modes, AC, CE, AE and RO, and subtract as follows to get two combination scores:

- AC - CE = ☐
- AE - RO = ☐

A positive score on the AC – CE scale indicates a more abstract score. A negative score on the AC – CE scale indicates that the score is more concrete. In the same manner, a positive or negative score on the AE – RO scale indicates that your scores are more active or more reflective (Kolb, 1981). By marking the two combination scores, AC-CE and AE-RO, on the two lines of the grid in Figure 6.2, a learner can find out in which of the four learning styles he/she prefers.

Figure 6.2: The learning style quadrants (Kolb, 1981)



Before embarking on the actual envisaged programme, there are certain pertinent facts that have to be highlighted as the most important and central to effective learning and teaching of Life Orientation. They must be considered whenever educators plan their lessons.

6.3 TEACHING LIFE ORIENTATION

6.3.1 Knowledge of learners is crucial

This principle relates directly to the focus of the study. Knowing the different types of learners in a classroom will assist educators to:

- accommodate relevant learning style needs and plan activities accordingly; and
- understand the learning level at which they are and what prior knowledge they have in relation to the topic to be taught.

6.3.2 Knowledge and understanding of the Life Orientation content

The thorough understanding of the content is crucial as it instils confidence in the educator.

6.3.3 Availability of resources should be ascertained

Most schools lack adequate physical development fields and equipment. Educators are expected to improvise and be innovative and use whatever resources are available around the learners' learning environment.

6.3.4 Gender sensitivity

Educators should ensure that all activities are relevant to both males and females.

6.3.5 Assessment tasks for Life Orientation

Assessment tasks form the basis of achieving the four Learning Outcomes of Life Orientation. To support the development of assessment tasks in Life Orientation, a variety of assessment tasks are suggested by the Department of Education (SA, 2007:44) (*cf.* 3.10.4) (*cf*. 3.8.1, 3.8.2).

6.3.6 Learning Outcomes and Assessment Standards

Learning Outcomes ensure integration and progression in the development of concepts and skills through the Assessment Standards. Linked to the Assessment Standards, educators formulate Lesson Outcomes that form part of the journey to achieve the Learning Outcomes (SA, 2002:18).

6.3.6.1 Learning outcome 1: Health promotion

The learner will be able to make informed decisions regarding personal, community and environmental health (SA, 2002: 26).

Assessment Standards (AS):

- Investigate menus from various cultures and suggest plans for healthy meals.
- Explore and report on links between a healthy environment and personal health.
- Explain children's health rights and responsibilities, and suggest ways in which to apply these in a familiar situation.

- List and explain traffic rules relevant to road users (SA, 2002: 28).

6.3.6.2 Learning outcome 2: Social development

The learner will be able to demonstrate an understanding of and commitment to constitutional rights and responsibilities and to show an understanding of diverse cultures and religions (SA, 2002**:** 26).

Assessment Standards (AS):

- Discuss children's rights and responsibilities as stipulated in the South African Constitution.
- Identify and explain stereotype, discrimination and bias.
- Compare the relationship between elders and children in a variety of situations in different cultural contexts.
- Comment on moral lessons selected from the narrative of a range of cultural groups in South Africa.
- Discuss significant places and buildings in a variety of religions (SA, 2002:30).

6.3.6.3 Learning outcome 3: Personal development

The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world (SA, 2002: 26).

Assessment Standards (AS):

- Identify own strengths and those of others, and explain how to convert less successful experiences into positive learning experiences.
- Explain why other persons' bodies should be respected.
- Consider and interpret the emotions of others.
- Demonstrate the ability to select and apply useful responses in conflict situations.
- Reflect on and learn from own personal experiences of working in a group.
- Apply appropriate study skills (SA, 2002: 25).

6.3.6.4 Learning outcome 4: Physical development and movement

The learner will be able to demonstrate an understanding of and participate in activities that promote movement and physical development (SA, 2002: 26).

Assessment Standards (AS):

- Participate in a variety of simplified invasion games.
- Demonstrate different ways to locomote, rotate, elevate and balance, using various parts of the body with control.
- Demonstrate basic field and track athletics techniques.
- Perform rhythmic movements with awareness of posture.
- Identify dangers and responsible safety measures in and around water (SA, 2002:34).

6.3.7 Learning Outcomes and their weighting

The weighting of Learning Outcomes provides an indication of the time that should be spent on achieving each of the Learning Outcomes.

- Learning outcome 1: Health Promotion (13%)
- Learning outcome 2: Social development (27%)
- Learning outcome 3: Personal development (27%)
- Learning outcome 4: Physical development (33%) (SA, 2007:3)

6.3.8 The major teaching methods with various teaching strategies to be used during the teaching of Life Orientation

The various teaching methods and strategies have to be selected very consciously for a specific lesson in order to attain a specific outcome while accommodating diversity in learning style needs of the learners.

In the following tables, Table 6.1-6.4, cursory overviews related to teaching, learning and assessment that accommodate learning style diversity based on the literature review conducted in Chapter 3. The cursory overviews could be utilised by educators to assist them in identifying a variety of teaching, learning and assessment activities. The

information in the tables below guided the development of the teaching and learning programme.

Table 6.1 provides a summary of the four major teaching methods with some of the teaching strategies as explored in Chapter 3 (*cf.* 3.6.1 – 3.6.4) linked to various learning style needs.

Table 6.2: Major teaching methods and teaching strategies

Direct Teaching Method and strategies (Sensors/Feelers, Watchers)	Indirect Teaching Method and strategies (Watchers, Thinkers)	Independent Teaching Method and strategies (Thinkers, Watchers)	Interactive teaching method and strategies (Doers, Thinkers)
Lectures	Oral presentations by learners	Home work	Group assignments
Presentation	Case studies	Research projects	Role-plays
Drill and Practice	Theme posters & collages	Interview tasks	Brainstorming
Guided worksheets	Role-plays and simulations	Equipment assisted learning (computers)	Group work: Jigsaws, Fishbowls, Round table
Video, film presentations	Design and make activities	Learning centres	Peer teaching
Demonstrations	Group projects	Assignments	Buddy system
Visitor presentation	Concept maps	Worksheets	Buzz groups
	Field trips and visits to sites	Crossword puzzles	
	Class debates	Assigned questions	
	Interviews	One-on-one debates	
	Surveys	Discussions	
	Investigations and experiments		

According to Table 6.2, Convergers (Sensors/Feelers) and Divergers (Watchers) who enjoy learning through perception, observation and sensory experiences prefer the Direct Teaching Method. The Indirect Teaching Method is more suitable to Divergers (Watchers) and Assimilators (Thinkers), because the use of this method allows for

opportunities where learners are involved in logical analysis, creating understanding for themselves as well as opportunities for reflection during debates and interviews. The aforementioned activities are preferred by Assimilators (Thinkers) and Divergers (Watchers), respectively. Assimilators (Thinkers) and Divergers (Watchers) will enjoy independent investigations and active involvement in research and project activities. The Interactive Teaching Method allows practical and interpersonal learning, which is the preferred way of learning for Accommodators (Doers). In addition to this, involvement with peers also creates opportunities for comparing and thinking about different viewpoints, which are favoured by the Assimilators (Thinkers).

The major four learning styles with examples of preferred learning activities as discussed in Chapter 3 (*cf.* 3.7), are provided in Table 6.2.

Table 6.3: Major learning styles with preferred learning activities

Learning style	Preferred learning activity
1. Convergers/Sensors/Feelers	small group discussions, providing specific examples, practical exercises, simulations, games, role-playing
2. Divergers/Watchers	creative problem-solving, personal journals, discussion groups, brainstorming, answering questions, reflection activities, observations
3. Assimilators/Thinkers	lectures, papers, analogies, model-building, theory-building, case studies, questioning
4. Accommodators/Doers	group activities, fieldwork, projects, homework

In essence, Table 6.3 indicates that Convergers (Sensors/Feelers) prefer concrete experience during learning, Divergers (Watchers) enjoy opportunities to think and experiment, Assimilators (Thinkers) love being challenged with tasks that demand logical thinking and Accommodators (Doers) are motivated by design and practical activities.

A summary of the major learning styles with their preferred assessment methods as deliberated in Chapter 3 (*cf.* 3.8), are provided in Table 6.3.

Table 6.4: Major learning styles with preferred assessment methods

Convergers (Sensors/Feelers)	Assimilators (Thinkers)	Accommodators (Doers)	Divergers (Watchers)
Educator-assessment method: objective tests	Educator-assessment method: essay tests	Peer-assessment method	Educator-assessment method: objective and essay tests
Group assessment	Self-assessment	Group assessment	Group-assessment
		Performance-based assessment	Self-assessment

Convergers (Sensors/Feelers), Assimilators (Thinkers) and Divergers (Watchers) prefer educator assessment. Assessment of learning, which comprises peer, group and self-assessment, can be implemented to accommodate all the different learning styles.

My view on the use of diverse assessment methods and strategies is based on the following arguments:

Educator assessment provides an organized and logical approach to assessment, which will be preferred by Convergers (Sensors/Feelers), Assimilators (Thinkers) and Divergers (Watchers). It is necessary that educators should distinguish between objective and subjective test items when utilizing educator assessment. Assimilators (Thinkers) who enjoy logical analysis and interpretation of information will not prefer objective test items, which call for single, correct answers. The interpersonal nature of group assessment and peer assessment, as well as the opportunity to make use of perception to reflect on the quality of performance during group assessment and peer assessment, will appeal to Divergers (Watchers), Accommodators (Doers) and Convergers (Sensors/Feelers). Accommodators (Doers) will prefer performance-based assessment, as they will not merely have to answer questions, but receive opportunities to create, produce and perform.

It is very important to ascertain learners' learning styles so that the teaching methods, learning activities and assessment methods accommodate a large variety of learners.

A summary of the major learning styles and their preferred learning processes according to the viewpoint of Kolb (1984:199) are summarized in Table 6.4.

Table 6.5: Major learning styles with preferred learning processes

Sensors/Feelers	Watchers	Doers	Thinkers
Collecting data	Observe and compare data/information	Collecting data/information	Sorting and classifying information
Sort and classify	Recording information	Performing practical activities	Interpreting information
Conduct investigations	Communicate information using different forms (drawings, graphs, descriptions)	Conducting research	Questioning information and situation
Perform practical activities	Describe pictures	Presentations	Predict results from data
Communicate information using different forms (mainly tactile descriptors like colour, texture, sound, smell, etc.)		Conduct investigations using models and drawings	Plan and conduct investigation

The examples of teaching, learning and assessment activities included in the teaching and learning programme is based on Grade 4 content, but the principles, components and processes incorporated to illustrate how diverse learning styles can be accommodated, can be applied to any grade and any other Learning Area. This programme should not be viewed as a replacement of educators' lesson preparation. The main aim for its development is to demonstrate by means of examples how a variety of teaching methods and strategies, learning activities and assessment methods and strategies can be utilized to accommodate diverse learning style needs in inclusive Grade 4 Life Orientation classroom settings in order to achieve desired Learning Outcomes.

I acknowledge that the achievement of Learning Outcomes may take time, and will not happen in one lesson. However, each individual lesson pays attention to a small aspect of what a learner needs to know in achieving the Learning Outcome. It is therefore reasonable to argue, that on a daily basis, outcomes will be formulated that need to be achieved, in order to guide learners to acquire smaller chunks of knowledge that form part of the bigger picture of information that the learner ultimately has to master, in order to achieve a Learning Outcome. Therefore, teaching and learning should ensure on a daily basis that learners achieve the outcomes set out for the lesson, by exposing learners to experiential learning. My argumentation links with the view of Kolb (1984:199), which indicated that in order to achieve learning outcomes successfully, learners need to be exposed to the full cycle of learning, which involves opportunities for sensory experiences, reflection, conceptualization and experimentation (*cf*. 6.4.1).

I trust and believe that the programme will assist educators to add value to the effective and efficient accommodation of diverse learning style needs in inclusive Grade 4 Life Orientation classrooms.

6.4 A TEACHING AND LEARNING PROGRAMME FOR LIFE ORIENTATION

6.4.1 Theoretical framework of the teaching and learning programme

Learning Programmes are structured and systematic arrangements of activities to promote the attainment of Learning Outcomes and Assessment Standards (SA, 2002:11). The examples that I designed comprise teaching, learning and assessment activities based on the principles of Kolb's experiential learning theory (Kolb, 1984:86), which identifies four distinct learning styles or preferences, which should be accommodated in a four-stage learning cycle.

Kolb (1984:86) includes this *"cycle of learning"* as a central principle to his learning theory, typically expressed as a four-stage cycle of learning in which immediate or concrete experiences provide a basis for observations and reflections. These observations and reflections are assimilated and distilled into abstract concepts producing new implications for action, which can be actively tested, in turn creating new experiences. Kolb indicated that, ideally, this process represents a learning cycle or spiral where a learner moves through a cycle of experiencing, reflecting, thinking and acting. Immediate or concrete experiences lead to observations and reflections. These reflections are then assimilated (absorbed and translated) into abstract concepts with

implications for action which the person can actively test and experiment with, which in turn enables the creation of new experiences (Kolb, 1984:86).

According to Kramer (2006:12), this cycle of experiential learning implies that educators need to ensure that whenever teaching takes place, which is presumably on a daily basis, that learners complete a full learning cycle that involves them in all four stages, ending with the presentation of a final product or event. The evidence of achieving the Learning Outcome should have required learners to experience, observe, reflect, think and act (Kramer, 2006:12).

The following two knowledge strands form the basis of the programme that follows, namely **Health Promotion** and **Personal development**. Figure 6.3 provides information regarding the components and processes of the teaching and learning programme.

For the purpose of the study, the following Learning Outcomes and Assessment Standards were chosen:

- Health Promotion: Learning Outcome 1 and Assessment Standards 1 - 4
- Personal Development: Learning Outcome 1 and Assessment Standards 1 – 6

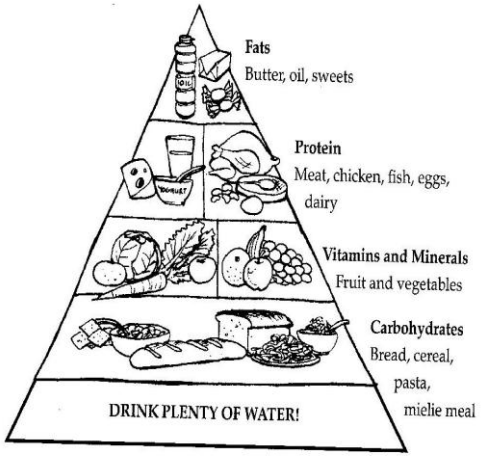
For the purpose of the Learning Programme, I refer to the learning styles as Sensors/Feelers, Watchers, Thinkers and Doers. The aforementioned concepts are descriptive in terms of what the learning style needs imply, and might be easier for teachers to understand.

In the study conducted by Maja (2006:167-185) a workable structure to guide the development of a teaching and learning programme in the Natural Sciences was developed. I utilised this structure to assist me with the development of a teaching and learning programme for Life Orientation.

In order to clarify the sequence of activities presented in the programme and who will be responsible for the execution of the activities

Figure 6.3: Learning outcome 1: Health Promotion

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method	Learning styles accommodated
AS 1: Investigates menus from various cultures and suggests plans for healthy meals	**Indirect:** discussion, interviews, investigations, design and make	**Activity 1**: Ask learners to individually read, think about and discuss the following text (Sensors/Feelers, Watchers) "South Africa is a multicultural country with diverse cultures. People from these cultural groups grow and eat traditional foods that grow in their regional areas"	**Homework**: Make a collage showing their traditional foods (Doers, Sensors/Feelers)	Educator (Watchers, Thinkers, Feelers) Checklist	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers
	Independent: homework, research, interviews, project	• Learners must explain and discuss in their groups and present their discussions in the class on the following words: multicultural , diverse cultures and tradition (Watchers, Thinkers, Doers, Sensors/Feelers)	**Assignment** As a group, design a poster showing different cultures and their different traditional foods (Doers, Sensors/Feelers).	Group (Sensors/Feelers, Watchers, Doers) Rubric with criteria	
	Interactive: (group assignment, group discussion **Direct**: presentation	• Learners investigate their cultures. (Sensors/Feelers, Watchers, Thinkers and Doers) • Do research about out their traditional foods. (Doers)	**Project** Draw up a plan for a cultural day function where traditional food will be prepared and sold for the school fundraising (Thinkers, Watchers)	Educator (Sensors/Feelers, Thinkers, Watchers) Project checklist	

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method	Learning styles accommodated
	Direct: lecture, present poster **Indirect**: plan, **Independent**: project **Interactive**: role-play	**Activity 2:** Display the large pyramids' food group poster. Let each learner copy the pyramids in their books (Sensors/Feelers, Watchers). Explain to learners that there are four food groups that they are going to use to plan balanced menus:  (Botha, Carstens, Staples, Vercuil, 2009:32) Learners must make an investigation on different types traditional food as to whether all food groups are included in their traditional menus (Thinkers, Doers)	**Project** Learners must individually plan a balanced traditional meal from their own cultures (Doers, Thinkers, Watchers) **Role-play** Learners must provide a solution through role-playing for underfed (malnutrition) people (Doers, Sensors/Feelers, Thinkers, Watchers)	Educator (Thinkers) project checklist or memorandum Peer (Doers) project checklist Group assessment (Feelers, Doers, Watchers) Observation checklist	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method	Learning styles accommodated
AS:2 Explores and reports on links between a healthy environment and personal health	**Direct**: Lecture **Indirect**: Discussion **Interactive**: Team presentation **Independent:** Assignments, library visits	The educator presents the following statement to learners and discusses with them a healthy environment and personal health (Sensors/Feelers, Watchers) :**" A healthy environment ensures your personal health"** • In small groups, learners should discuss and give their ideas on how to link a healthy environment to personal health. Ideas will be presented by teams (Feelers, Doers) • The educator displays a poster of an unhealthy environment and learners should describe the picture and identify items that make the environment unhealthy (Watchers, Sensors/Feelers) • Groups get a pack of unhealthy & healthy environment photos and two clean posters to sort and classify them (Thinkers)/ and paste them to design posters according to healthy environment and unhealthy environment (Doers). Teams present their classifications to the rest of the class	**Assignment**: Learners should individually visit the library to find information on the impact of unhealthy and healthy environments on their personal health (Thinkers, Doers). **Homework & interview** Learners are presented with information on an unhealthy environment and they have to prepare themselves for an individual interview on how to prevent themselves from being affected by the environment (Doers, Sensors/Feelers, Watchers, Thinkers) **Test** 1. What is the importance of keeping our houses healthy and clean? 2. Why is polluted air unhealthy for us? 3. What must we do to ensure fresh air in our bedrooms? 4. Why is it important to drink clean water? 5. How do we :keep the toilets clean every day? 6. Why should domestic refuse be removed regularly?	Educator: Assignment checklist or memorandum Educator: interview criteria Peers: memorandum	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

<table>
<tr><th>Assessment standard</th><th>Teaching method and strategies</th><th>Learning activities</th><th>Suggested assessment tasks</th><th>Suggested assessment method</th><th>Learning styles accommodated</th></tr>
<tr>
<td>AS:3

Explains learners' health rights and responsibilities, and suggests ways in which to apply these in a familiar situation</td>
<td>Direct: (lecture, presentations, demonstrations)

Independent: (Research, worksheet)

Interactive: (group discussion)

Indirect: (role-play)</td>
<td>The educator presents children's rights and responsibilities in the class using a poster (Feelers, Watchers).

Learners discuss the implications of children's rights and responsibilities in small groups and write down their ideas. Reporters will present group ideas to the rest of the class (Sensors/Feelers, Doers, Watchers).

Homework

Learners conduct research on health rights and responsibilities. Visits to local clinics. Talk to health workers about ways to stay healthy. Each learner must collect and present his/her findings to the class for critical analysis (Thinkers, Watchers, Doers, Sensors/Feelers).</td>
<td>Worksheet

Match the following children's rights and responsibilities

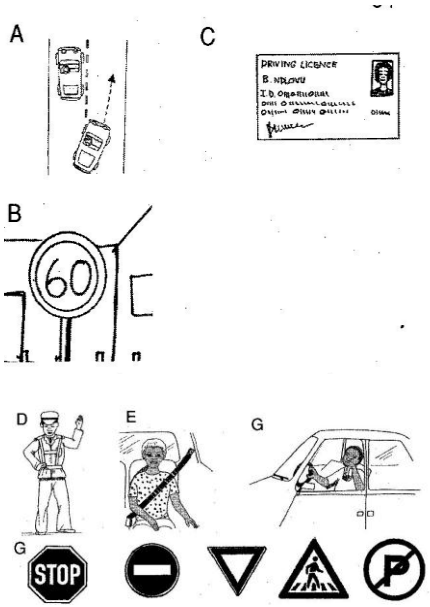
(Watchers, Thinkers)
<table>
<tr><th>Right to:</th><th>Responsibility:</th></tr>
<tr><td>health care</td><td>No littering</td></tr>
<tr><td>a healthy diet</td><td>Assist parents at home</td></tr>
<tr><td>a clean toilet</td><td>Look after own health</td></tr>
<tr><td>a clean environment</td><td>Do not waste and pollute water</td></tr>
<tr><td>be safe at home</td><td>Keep toilet clean</td></tr>
<tr><td>clean water</td><td>Do not waste food</td></tr>
</table>
Role-play (Watchers, Sensors/ Feelers)
Learners must role-play to demonstrate the children's' health rights and responsibilities in pairs: caring for a sick person</td>
<td>Peer (Doers)

(checklist)

Educator (Sensors/ Feelers, Watchers)

Observation (checklist)</td>
<td>In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles:

Sensors/Feelers
Watchers
Thinkers
Doers</td>
</tr>
</table>

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method	Learning styles accommodated
AS:4 Lists and explains traffic rules relevant to road users	Direct: (Lectures, demonstrations) Indirect: (presentations, field trips and visits to sites) Independent: (worksheets) Interactive: (peer assessment)	Field trip: Visit the traffic department for presentation, talks and demonstrations about traffic. (Sensors/Feelers, Watchers). Learners receive a work sheet with questions to answer based on the presentation (Thinkers, Watchers) Learners demonstrate the obeying of traffic rules (Doers)	**Worksheet 1** Learners identify different traffic rules by looking at the following pictures (Feelers, Watchers) and explaining the meaning of each road sign (Thinkers, Watchers) (Jacobs, 2007:22-23) 	Educator (memorandum)	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method	Learning styles accommodated
			Assignment Learners identify and draw five road signs along their way to school (Doers, Sensors/Feelers, Watchers) Learners must write down and explain five traffic rules each for pedestrians, motorists and cyclists (Thinkers) Learners should explain in writing the importance of road signs (Thinkers, Watchers, Doers).	Educator (memorandum)	

Figure 6.4: Learning outcome 1: Personal development

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
AS 1 Identifies own strengths and those of others, and explains how to convert less successful experiences into positive learning experiences	**Direct:** (lecture) **Indirect:** (Presentation) **Interactive:** (peer teaching) **Independent** interviews)	• Explain to and discuss with learners what is meant by strengths and weaknesses (Sensors/Feelers) • Let each learner draw a spider web and identify his/her own strengths/abilities and weaknesses on the web and present to the class (Doers, Watchers) • Learners work in pairs to compare and discuss their own list of strengths and weaknesses with that of their partner (Doers, Watchers, Thinkers) • Learners must list all things that they are not good at, and work in pairs to suggest ways of improving these (Thinkers) • Learners must interview their family members about their strengths and weaknesses. Find out how to build on strengths and how to deal with weaknesses (Thinkers, Doers).	**Homework** • Each must write a paragraph about their own strengths and weaknesses (Feelers). • Explain how you can change something you are not good at into something positive (Watchers). • Identify a situation where you can convert a less successful experience in your life to a more successful experience (Thinkers). **Project** Design and make a poster with three columns. In one column, you should indicate your strengths and in the other column indicate your weaknesses (Doers). Column three: information on how to accommodate weaknesses	Educator (Sensors/Feelers, Thinkers, Watchers) Memorandum Peer (Doers) Checklist with criteria	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
AS 2 Explains why other persons' bodies should be respected	**Direct** (presentation) **Indirect** (visit to sites) **Interactive** (buzz group, discussions) **Independent** (visit to library, research, worksheet)	Educator presents an introduction to the topic respect. In addition, get learners to contribute their views of what respect implies. Learners visit the nearest clinic to be taught about the functioning of their bodies (Feelers, Watchers). Divide learners into buzz groups and let them discuss why their bodies and other peoples' bodies should be respected (Doers, Watchers). Learners must visit the library and do research on ways to, the reasons for and the importance of respecting the self and others (Thinkers, Doers).	**Worksheet** Complete the following sentences by choosing words from the words in brackets (rape, body of the other person, private parts, respect, unique, cruel and inhuman, protected) Every learner is _____ and special, a human being deserving _____. Every child has the right not to be touched at his or her _____ or in a _____ way. Every child has the right to be _____ against sexual exploitation and _____. Children may not be _____, used for sex or be sexually molested. It is very important to respect one's body and the _____. (Thinkers, Watchers, Sensors/Feelers)	Educator (Sensors/Feelers, Thinkers, Watchers) Memorandum or Peer assessment (Watchers)	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
			Paragraph Learners must individually write a paragraph about what they do to respect their bodies and those of others (Watchers, Thinkers). **Role-play** In groups of four, learners must role-play to show ways of respecting one's body and those of others (Doers, Sensors/Feelers).	Educator (Sensors/Feelers, Thinkers, Watchers) Memorandum Group assessment (Doers/Watchers/ Sensors/Feelers) Checklist with criteria	

<table>
<tr><th>Assessment standard</th><th>Teaching method and strategies</th><th>Learning activities</th><th>Suggested assessment tasks</th><th>Suggested assessment method and tools</th><th>Learning styles accommo-dated</th></tr>
<tr>
<td>AS 3

Considers and interprets the emotions of others</td>
<td>Direct:

(video presentation)

Indirect:
(demon-stration)

Independent:
(work-sheet)</td>
<td>The educator plays a video of faces showing different types of emotions and discusses this with learners (Feelers). Learners demonstrate any emotion of their choice to the class. The class must identify the emotion and explain what the emotion involves and the effect it can have (Watchers, Doers).

Worksheet
Match the items in column 1 and column 2 correctly (Thinkers)
<table>
<tr><th>Emotions</th><th>Responses</th></tr>
<tr><td>You feel angry because a friend told lies about you.</td><td>Congratulate them and wish them good luck</td></tr>
<tr><td>You are jealous because your friend was chosen for the soccer team and you were not.</td><td>Talk about your feeling</td></tr>
<tr><td>You are excited because you are going to model in a fashion show.</td><td>Say you are sorry</td></tr>
<tr><td>You feel sorry because you were nasty to your sister</td><td>Invite your friend to the show</td></tr>
</table>
</td>
<td>Class activity
Work in pairs: choose the correct answer for each question, and motivating your choice (Sensors/Feelers, Watchers)

1. Your little brother wakes up after a bad dream. Do you …
a) tell him to be quiet and to go back to sleep?
b) sit with him or hold him until he goes back to sleep?
c) tell him he is a baby?
2. Your best friend wins a ticket to a football match. Do you …
a) get angry and refuse to talk to him?
b) tell him that you are happy for him?
c) tell him that you do not like the teams that are playing?
3. You hit a ball that broke a neighbour’s window. Do you …
a) say sorry and say you will try to pay for a new window out of your pocket money?
b) blame your friend who is not there ?
c) laugh and say it was just a little accident?</td>
<td>Peer (Thinkers)

Peers compare viewpoints</td>
<td>In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles:

Sensors/Feelers
Watchers
Thinkers
Doers</td>
</tr>
</table>

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
	Interactive: (brainstorming)	**Brainstorming** In small groups, learners must brainstorm other emotions that they can think of that were not dealt with in class. Write them down on a spider diagram (Doers, Thinkers, Watchers)	**Research task** Learners must individually visit the library to do research on the meaning and causes, and implications of the following emotions (Thinkers, Doers) • Sad • Angry • Happy • Shy • Frightened • Jealous • Lonely • Excited • Surprised	Educator (Sensors/Feelers, Watchers)	

<table>
<tr><th>Assessment standard</th><th>Teaching method and strategies</th><th>Learning activities</th><th>Suggested assessment tasks</th><th>Suggested assessment method and tools</th><th>Learning styles accommo-dated</th></tr>
<tr><td></td><td></td><td></td><td>Worksheet

The educator must give each learner a copy of a puzzle to complete by identifying good and bad emotions (Watchers, Sensors/Feelers)

<table>
<tr><td>S</td><td>O</td><td>L</td><td>L</td><td>E</td><td>P</td><td>P</td><td>F</td><td>E</td><td>R</td></tr>
<tr><td>S</td><td>R</td><td>D</td><td>O</td><td>E</td><td>H</td><td>O</td><td>R</td><td>H</td><td>S</td></tr>
<tr><td>A</td><td>V</td><td>F</td><td>N</td><td>I</td><td>N</td><td>A</td><td>I</td><td>K</td><td>U</td></tr>
<tr><td>D</td><td>S</td><td>I</td><td>E</td><td>F</td><td>A</td><td>N</td><td>G</td><td>R</td><td>Y</td></tr>
<tr><td>M</td><td>C</td><td>O</td><td>L</td><td>D</td><td>P</td><td>A</td><td>H</td><td>G</td><td>H</td></tr>
<tr><td>E</td><td>O</td><td>M</td><td>Y</td><td>N</td><td>U</td><td>T</td><td>T</td><td>S</td><td>A</td></tr>
<tr><td>H</td><td>F</td><td>A</td><td>I</td><td>L</td><td>U</td><td>R</td><td>E</td><td>P</td><td>P</td></tr>
<tr><td>J</td><td>E</td><td>A</td><td>L</td><td>O</td><td>U</td><td>S</td><td>N</td><td>A</td><td>P</td></tr>
<tr><td>O</td><td>S</td><td>H</td><td>Y</td><td>M</td><td>T</td><td>V</td><td>E</td><td>O</td><td>Y</td></tr>
<tr><td>S</td><td>E</td><td>X</td><td>C</td><td>I</td><td>T</td><td>E</td><td>D</td><td>E</td><td>O</td></tr>
</table>

(Jacobs, 2007:66)

Project

Each learner must design and make one mask, displaying any emotion of their choice (Doers).</td><td>Self (Thinkers)

Peer (Doers)

Checklist with criteria</td><td></td></tr>
</table>

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
AS 4 Demonstrates the ability to select and apply useful responses in conflict situations.	**Direct:** (presentation)	Educator introduces the topic with a short presentation on conflict and dealing with conflict. 1. Educator projects the following text on a transparency and learners must read it in groups: "*We feel angry towards people when they do or say things we do not like. What should we do? There are different ways of dealing with anger. Some ways are positive and some ways are negative.* *If we shout at a person, we will get angrier and this will cause more conflict. This is negative. But if we talk to the person and say what we feel, we can be friends again. This is positive.*" (Sensors/Feelers)	**Short test** 1. Explain what is meant by conflict 2. Is conflict a positive or a negative way of solving problems? Support your answer with a motivation. 3. Identify three (3) positive ways of dealing with conflict and two (2) negative ways of dealing with conflict. (Sensors/Feelers, Watchers, Thinkers)	Educator (Sensors/Feelers, Thinkers Watchers)	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
	Indirect (debate) **Independent**: (interview tasks) **Interactive:** (drama)	2. Divide learners into two groups. Each group must choose five representatives for a debate. Topic: "Conflict is the best way to solve problems. Conflict is not the best way to solve problems". Groups must discuss their topics and assist their representatives with facts to present. (Watchers) 3. Design interview questions and interview parents, neighbours or educators about the positive and negative ways in which they deal with conflict. (Thinkers) 4. Learners in small groups must perform different drama plays that show conflict situation and show how it can be resolved without their emotions taking over by giving responses that show respect for the person they are in conflict with, without violence and showing empathy for the other party's feelings (Doers).	**Worksheet** Each learner must complete the following sentences individually: 1. Every time, I respond to conflict by _____ 2. The way I respond is a good or bad way to respond because _____ 3. Five ways of responding to conflict are ___, ___, ____, _____, _____. (Watchers) **Case study** Your two classmates wrongly accuse you of stealing your educator's lunchbox. Suggest or describe five best ways of dealing with this conflict. (Thinkers, Watchers)	Peer (Watchers) Self (Thinkers)	

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
			Brainstorming Divide learners into groups and give them different cards that describe conflict situations. They must read them and brainstorm about the conflict statement on the card. List good and bad ways in which they think that conflict can be solved (Watchers, Thinkers). **Role-play** The group must choose one conflict situation and role-play it to demonstrate the conflict situation, as well as how they will resolve it. (Thinkers, Doers)	Group assessment with criteria (Doers)	

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
AS 5 Reflects on and learns from own personal experience of working in a group. Topic: Working together	**Direct:** (video presentation) **Indirect:** (presentation) & **Interactive:** (discussion)	1. The educator projects a presentation of a group of learners working together as a team and another presentation of a group of learners struggling to work together. Learners in their groups must compare the two presentations and identify the positive and the negative things they have observed from the video clips (Feelers, Watchers). 2.Divide learners in small groups. Let them discuss and make class rules that would guide their working together. They must present this in the class (Doers, Thinkers, Watchers). (From group presentations, the class compiles a set of rules for the class). A poster reflecting the rules must be designed and pasted in the classroom.	**1. Interview task** Learners conduct interviews in small groups with educators at the school who teach them to find out what skills they have that keep them working in groups/teams successfully. Learners must record all the responses, analyse them and present them to the class (Watchers, Doers). **2. Homework** Individually, learners must write a paragraph about what they like and do not like about working in a group (Thinkers).	Peer (Doers) Self (Thinkers)	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
	Independent (Thinkers)	3. Learners must work individually to complete the worksheet in class (Thinkers). Choose the following words in brackets to complete the paragraphs below (respect and trust, talk, choose, share, responsibility, belong, friends, together). "Sometimes we do not have any choice about the group we ____ to. You do not have a choice in choosing your family, the group of learners in your class, or your sports team. But often people _____ the group they belong to. For example, groups of _____ have usually chosen to be in that group together. Group members should be happy to _____ interests, information, loyalty, honesty, time and space with the rest of the group. Group members should _____ one another. They should _____ to one another (not of one another). They should work _____. They should take _____ for other members of the group. (Millennium series)	**3. Assignment.** Learners must do a compute search on advantages and disadvantages of working in groups/teams in pairs, and how to maintain healthy groups/teams (Thinkers, Feelers). **4. Group project** - Learners should organise a class fundraiser/picnic. They must talk about it and share ideas, and draw up a plan of action according to the following: - Does your activity need material? Decide who must bring what. - What needs to be done? Think of a plan of action. - What will each member of the group do? - How will you record what happened? -Think of an enjoyable way to end the project. (Doers, Thinkers)	Educator (Thinkers, Sensors/Feelers) Memorandum Group (Sensors/Feelers, Doers, Watchers) Checklist with criteria	

Assessment standard	Teaching method and strategies	Learning activities	Suggested assessment tasks	Suggested assessment method and tools	Learning styles accommo-dated
AS 6 Applies appropriate study skills	**Direct**: (lecture) **Independent**: (research interview) **Interactive**: (role-play) **Indirect**: (discussion)	1. The educator must guide a class discussion about the importance of studying (Sensors/Feelers, Watchers). 2. Learners must conduct a research interview with somebody they know about successful study skills and share it with the class (Thinkers). 3. Role-play Learners should perform a role-play in pairs. One learner is the owner of a study room, and the other the advisor on how to make the room more suitable for effective study (Doers, Thinkers). 4. Learners receive four different pictures of study places that are not suitable for studying. In pairs they must discuss and list all things that are destructive to studying (Sensors/Feelers, Watchers)	**1. Group and individual task** Learners must discuss in small groups of six, write down the study methods and study skills that are the most successful according to them, and present their ideas in the class (Watchers). 2. Learners working in pairs plan and design a study timetable and everything that is needed for successful studying (Doers, Thinkers). 3. Learners must write two short paragraphs about their own view of successful study methods, skills and a conducive study environment (Thinkers, Watchers). 4. Learners must list all things in their own rooms or study areas at home that can distract them while studying (Sensors/Feelers, Watchers).	Peer (Doers) Peer (Doers) Self (Thinkers)	In achieving the Assessment Standard the teaching methods and strategies, learning activities, assessment tasks, and methods of assessment were chosen to purposefully accommodate all four learning styles: Sensors/Feelers Watchers Thinkers Doers
Chapter 6: A TEACHING AND LEARNING PROGRAMME				Educator (Feelers)	**237**

6.4 CHAPTER SUMMARY

In this chapter, I provided examples of how an educator can achieve Learning Outcomes by employing a variety of teaching methods and strategies. Learning activities and assessment approaches to accommodate all learning styles that will ensure learning that involves the entire learning cycle of concrete experience, reflective observation, abstract conceptualization and active experimentation (Kolb, 1984:199), were included.

In the final chapter, Chapter 7, I conclude the study with a summary, findings and recommendations

CHAPTER 7

SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 INTRODUCTION

This study was conducted with the purpose of gauging how Grade 4 Life Orientation educators understand diverse learning style needs, and exploring how they accommodate diverse learning styles during teaching in inclusive Grade 4 Life Orientation classrooms.

It was important that the literature review and the data collected by means of the focus group interviews and observations contributed to answering the problem question on which the study focused, and contributed to achieving the overall aim and objectives of the study. This chapter provides information regarding the following:

- An overview of the study
- Findings from the literature review
- Findings from the empirical research
- Findings in relation to the aim and objectives of the study
- Limitations of the study
- Recommendations
- Suggestions for further study
- Contribution of the study to theory
- Contribution of the study to practice

7.2 AN OVERVIEW OF THE STUDY

The overview of the study intends to provide a brief summary of the gist of the preceding chapters of the study.

7.2.1 Chapter 1

The purpose of this chapter was to orientate the reader regarding the problem statement, the aims and objectives of the study and the empirical research design utilized in the study (*cf.* 1.2, 1.3, 1.4).

The problem statement was translated into the main aim of the study, namely to gauge Grade 4 Life Orientation educators' understanding of diverse learning style needs, and to explore how they accommodate diverse learning styles during teaching (*cf.* 1.5).

A qualitative research design (*cf.* 1.6.2.2) with focus group interviews and observations as data collection methods (*cf.* 1.6.2.5), were utilized for this research (*cf.* 1.6.2). I chose a qualitative design, as it was my intent to gain a deeper understanding of how the educators' understand diverse learning style needs and explore how they adapt their instructional practice to accommodate diverse learning styles, by talking to the participants and observing them in their natural classroom settings. The research was conducted with a convenient and purposefully selected group of Grade 4 Life Orientation educators in the Sedibeng West District of the Gauteng Department of Education (n = 40) (*cf.* 1.6.2.4).

7.2.2 Chapter 2

This chapter focused specifically on providing insight into teaching in inclusive classrooms (*cf.* 2.2), and the development of inclusive education nationally and internationally (*cf.* 2.3). Inclusion refers to the acknowledgement of diversity among learners and supporting them to satisfy all their different needs. Educators need to create teaching and learning environments that focus on accommodative teaching methods and a flexible curriculum to provide quality education for all and to avoid pedagogical barriers to learning (Muthukrishna & Schoeman, 2000:315-335; SA, 2001:6; Mowes, 2002:42; Du Plessis, 2007:35) (*cf.* 2.4, 2.5).

7.2.3 Chapter 3

In this chapter, I focused on elucidating the diverse learning style needs and preferences of learners (*cf.* 3.2), and explored a variety of learning style models (*cf.* 3.3). Learning styles refer to orientations towards approaching learning tasks and processing information in different ways. In addition to this, learning styles also refer to the way that learners begin to concentrate on, process, internalize and remember new and difficult academic information (Lovelace, 2005:176; Grosser & De Waal, 2006:79) (*cf.* 3.2).

In the context of the study, the learning style model of Kolb (1984:199) (*cf.* 3.3.1), guided the conceptualization of learning style needs, informed the development of focus group interview questions and the criteria for the observations. Furthermore, the experiential learning cycle informed the design of teaching, learning and assessment activities that were included in the teaching and learning programme. According to the learning style model of Kolb (1984:199), learner preferences include the following: concrete experience (Convergers, Sensors/Feelers), opportunities to reflect (Divergers/Watchers), independent and logical thinking (Assimilators/Thinkers), and active, hands-on experience (Accommodators/Doers) (*cf*. 3.3.13).

The importance of accommodating learning style needs was explored. Accommodating learning style needs during teaching, learning and assessment is *inter alia* important to:

- Avoid problems with concentration and internalizing and remembering information.
- Unleash learning potential.
- Improve interest and motivation.
- Increase capacity and willingness to learn.
- Avoid frustration during teaching and learning (Larkin-Hein, 2000:2; Levinrad, 2000:14; Dasari, 2006:27; Van Rensburg, 2002:136) (*cf.* 3.4).

A variety of teaching methods and strategies, should be employed to accommodate diverse learning style needs (Grosser, 2001:23-45; Kramer, 2006:101-106; Mahaye & Jacobs, 2007:175) (*cf.* 3.6). The literature revealed four major teaching methods, namely Direct, Indirect, Independent and Interactive methods with their related strategies that need to be employed in order to accommodate diverse learning style needs (Grosser, 2001:23, 45; Mahaye & Jacobs, 2007:175) (*cf.* 3.6.1-3.6.4). Linked to the aforementioned, the chapter also paid attention to how educators' beliefs about knowledge acquisition influence the choice of teaching methods and strategies, learning activities and assessment approaches (*cf.* 3.9). According to Schraw and Olafson (2003:186), it is important that educators balance the realist (transmission and reception approach, Direct Teaching), contextualist (collaborative learning, Interactive Teaching) and relativist approaches (independent learning, Indirect and Independent Teaching) to knowledge acquisition in their classrooms, in order to make teaching environments effective for all learners (Smith, 2002:64; Cuthbert, 2005:235-249; Lovelace, 2005:176-177; Grosser & De Waal, 2006:79) (*cf.* 3.2)

Learning activities to accommodate diverse learning styles were characterized as activities that take place when learning occurs (Van Rensburg, 2002:179), and need to be structured to accommodate different learning styles (Sutliff & Baldwin, 2001:270) (*cf.* 3.7). Learning activities should create opportunities for all learners to learn through sensory experiences, thinking and reflection, independent logical thinking and active experimentation (Kolb, 1984: 199) (*cf.* 3.3.13).

Finally, the chapter highlighted the assessment approaches to accommodate learning style needs. A balanced application of assessment of learning, traditional assessment by means of tests and exams (educator assessment) and assessment for learning approaches by means of peer, group and self-assessment, is required to accommodate all learning style needs (Chappius & Stiggins, 2002:40-43; Stiggins, 2002:759; Davies & Waverly, 2005:1 (*cf.* 3.8.1, 3.8.2).

7.2.4 Chapter 4

This chapter elaborated on the empirical research design used to investigate the research problem. Qualitative phenomenological research by means of focus group interviews and observations was conducted. It was my intention to gauge educators' understanding of diverse learning style needs, and to explore how educators deal with the demands made by accommodating diverse learning style needs during teaching and learning in inclusive Grade 4 Life Orientation classroom settings (*cf.* 4.3.2.1, 4.3.3.1, 4.4.1.2, 4.4.2).

7.2.5 Chapter 5

The data obtained from both the focus group interviews and observations were analysed and interpreted in this chapter by means of deductive and inductive content analyses (*cf*. 4.4.1.4, 4.4.2.10).

The triangulation of the data obtained from the focus group interviews and the observations revealed that educators do not have an adequate and comprehensive understanding of what the different learning style preferences entail (*cf.* 5.3.1, 5.3.2). Learning styles were mainly linked to ability, intelligence, personality (introvert or extrovert), levels of achievement (good or poor) and learning tempo (fast or slow) (*cf.* 5.3.1). Furthermore, the data revealed that the educators' choice of teaching methods and strategies, learning activities and assessment approaches, do not accommodate diverse learning styles in a balanced way (*cf.* 5.3.3, 5.3.4, 5.3.5, 5.4.3), but place strong emphasis on the use of Interactive Teaching by means of group work. Both the findings from focus group interviews and observations indicated that educators experience challenges in accommodating diverse learning styles during teaching Grade 4 Life Orientation in inclusive classrooms. Finally, the data reported a strong focus on educator assessment (cf. 5.3.6, 5.4.4)

7.2.6 Chapter 6

The focus of this chapter was the teaching and learning programme that was designed to give basic and practical examples to Grade 4 Life Orientation educators on how to accommodate diverse learning styles during teaching,

learning and assessment. The programme provides educators with practical examples of how to link teaching methods and strategies, learning activities and assessment methods and strategies to learners' learning styles in order to achieve Learning Outcomes (*cf.* 6.4). This chapter also explained the Learning Style Inventory of Kolb (1981), that educators can use to determine the learning style preferences among their learners (*cf*. 6.2).

7.3 FINDINGS FROM THE LITERATURE REVIEW

A literature review was conducted to elucidate information on inclusive education and the importance of accommodating diverse learning style needs in an inclusive classroom setting.

Inclusive education acknowledges that all children and the youth can learn and they all need support (*cf.* 2.2). It enables education structures, systems and learning methodologies to meet the needs of all learners. These inclusive education systems must recognize and respond to the diverse needs of their learners, accommodating both different styles and rates of learning, and ensure quality education to all through an appropriate curriculum, and organizational and teaching strategies (UNESCO, 1994:6, 11-12; SA, 2001:6, 16; Dyson, 2001:27; Thomas & Loxley, 2001:118; Swart & Pettipher, 2005:3-20) (*cf.* 2.2, 2.3).

Literature revealed that human beings are not the same. They are unique, individual and different. Therefore learners learn differently according to different styles which educators have to accommodate (Kruger & Adams, 2002:21; Skogsberg & Clump, 2003:177; Grosser & De Waal, 2006:19; Visser *et al.,* 2006:98) (*cf.*3.2). According to the literature learning styles are orientations towards approaching learning tasks and processing information in different ways (Lovelace, 2005:176; Grosser & De Waal, 2006:79) (*cf.* 3.2). Furthermore, a learning style is influenced by physiological aspects, personality aspects, emotional factors, sociological factors, intelligence, task functioning in the brain, level of dependency during teaching and styles to process information (Kolb, 1984:199; Hermann, 1990:66; Lawrence, 1994:89;

Felder, 1996:20; Burke & Dunn, 2003:103-106; Nieman & Pienaar, 2005:85-86) (*cf.* 3.3.13).

In the context of the study, the learning style model of Kolb (1984:199) was used as theoretical framework. This learning style model distinguishes between four learning styles based on perceptual preference, namely:

- Convergers/Sensors and Feelers prefer to learn through sensory experiences.
- Divergers/Watchers prefer to learn through perception and observation rather than action.
- Assimilators/Thinkers prefer to analyse things logically and create understanding for them, like reading theory and studying well by themselves.
- Accommodators/Doers prefer to learn by trying things out and are willing to take risks, prefer practice to theory and enjoy learning activities that enable them to do something, such as projects, tasks, discussions and similar activities (Kolb, 1984:199; Little, 2004:8) (*cf.* 3.2.1).

In order for educators to accommodate diverse learning styles, they need to utilize different teaching methods and strategies during teaching. Teaching methods are broad plans of action for teaching learning activities with the idea of achieving one or more outcomes and they each encompass a variety of strategies. Furthermore, they are referred to as particular techniques that educators use to assist different learners in gaining knowledge to enable them to achieve expected and desired Learning Outcomes. The teaching methods referred to are Direct, Indirect, Independent and Interactive (Killen, 1998:11; Borich, 2003:221; Mabena, 2004:1; Monyai, 2006:107-112; Mahaye & Jacobs, 2007:175; Ognibene, 2007:24-27, 30 Arends, 2009:290-295) (*cf.* 3.6). The Direct Method, which focuses on presentations and demonstrations, accommodate learners who enjoy learning through sensing/feeling (Convergers) and watching (Divergers) (*cf.* 3.6.1). The Indirect and Independent Method, which allows opportunities for reflection and independent knowledge construction is preferred by Divergers/Watchers, and

Assimilators/Thinkers (*cf.* 3.6.2, 3.6.3). Accommodators/Doers enjoy teaching by means of the Interactive Method, which allows them to become involved in active and interpersonal learning (*cf.* 3.6.4).

Each of the aforementioned methods can be linked to a particular learning style preference (Schraw & Olafson, 2003:185; Schraw & Olafson, 2008:25-41) (*cf.* 3.9). Convergers (Sensors/Feelers) and Divergers (Watchers) prefer direct, educator-centred teaching which involves lecturing, presentations, demonstrations, drill and practice that allow opportunities for sensory experience and reflective observation (Grosser & De Waal, 2006:21) (*cf.* 3.9).

In addition to utilizing teaching methods and strategies in a balanced way, it is also emphasized by the literature that educators need to select and plan a variety of learning activities to accommodate diverse learners in the Life Orientation classroom, in order to motivate learners to perform these activities (Sutliff & Baldwin, 2001:270; Van Rensburg, 2002:179) (*cf.* 3.7). The learning activities should provide learners with concrete experience, opportunities for thinking, and experimenting (practical activities) (Kolb, 1984:199; Arndt & Underwood, 1990:30) (*cf.* 3.1.13).

The assessment of learners' work, need to be continuous, formative and summative in nature (Maree & Fraser, 2004:51; Marnewick & Rouhani, 2007:268, 269) (*cf.* 3.8.2, 3.10.4). Furthermore, a variety of assessment methods and strategies that are responsive to diverse learning style needs and preferences need to be utilized, and reflect a balance between assessment of learning (educator assessment) and assessment for learning approaches (peer, group, self-assessment) (Stiggins, 2002:759, 761; Maree & Fraser, 2004:34; SA, 2007:7) (*cf.* 3.8).

In order to provide variety in terms of the choice of teaching methods and strategies, learning activities and approaches to assessment, it is important that educators balance the realist (transmission and reception approach, Direct Teaching), contextualist (collaborative learning, Interactive Teaching) and relativist approaches (independent learning, Independent and Indirect Teaching) to knowledge acquisition in their classrooms. By balancing the

various approaches educators will make teaching environments effective for all learners (Schraw & Olafson, 2003:184; Cuthbert, 2005:7; Lovelace, 2005:176-177; Chan, 2008:264; Muis & Sinatra, 2008:137-150; Schraw & Olafson, 2008:25-41) (*cf.* 3.2, 3.9).

The literature review also paid attention to the importance of accommodating learning style needs during teaching and learning. Larkin-Hein (2000:2), Levinrad (2000:14), Van Rensburg (2002:13) and Dasari (2006:27) *inter alia* highlight the following: accommodating learning style needs during teaching will unleash learners' potential, improve interest and motivation to learning, avoid frustration and unwillingness to learn and contribute to positive relationships among educators and learners (*cf.* 3.4).

7.4 FINDINGS FROM THE EMPIRICAL RESEARCH

The following findings were derived from the empirical research:

- Based on the data obtained from the focus group interview and observations, it was evident that the educators who took part in the study do not clearly understand what learning needs are, or are not aware of the different learning style needs of their learners (*cf.* 5.3.1, 5.3.2, 5.3.3, 5.4.1), (*cf.* Figure 5.1). The educators link learning styles to learners being fast or slow, personalities that are introvert or extrovert, and learners with different abilities and intelligences in one classroom. Although the educators rightfully linked learning styles to intelligence (Armstrong, 2000:321; Gardner in Nieman & Pienaar, 2006:86) (*cf.* 3.3.9) and regarded learning styles as different ways of learning, they provided limited examples of what exactly the learning preferences of learners entail. I therefore argue that the responses of the educators reflected a limited awareness and understanding of what learning styles entail.

  Furthermore, the observations revealed that the classroom practices of the educators accommodate learners through sensory experiences, reflective observation and active involvement, but not through abstract conceptualization and independent thinking (*cf.* 5.4.1). This finding points

to imbalances in the accommodation of diverse learning style needs by educators and does not support the policy of inclusion that stipulates that human beings are not the same; they are unique, different and individual (Mowes, 2002:42; Du Plessis, 2007:35) (*cf.* 2.4.1). Furthermore, this finding does not concur with the argument of Kolb (1984:199) that in order to achieve Learning Outcomes and make learning meaningful to all learners, they must get the chance to be involved in concrete experience, reflective observation, abstract conceptualization and active experimentation (*cf.* 3.9).

A lack of understanding what learning style needs refer to, could imply that educators might not be aware of the importance of accommodating learning style needs to improve interest and motivation to learn and to avoid frustration and unwillingness to learn (Larkin-Hein, 2000:1; Van Rensburg, 2002:136; Dasari, 2006:27) (*cf.* 3.4). In addition to the aforementioned, a lack of understanding what learning style needs are, can lead to ineffective teaching practices that create pedagogical barriers that influence learning negatively (Muthukrishna & Schoeman, 2000:315-335; Swart & Pettipher, 2005:3-20) (*cf.* 2.5). In this regard, the observations pointed to some learners being passive and undisciplined which could imply that they might be bored and frustrated with the learning processes utilized in their classrooms (Van Rensburg, 2002:136) (*cf.* 5.4.1).

It appears as if the educators are unaware of the importance of accommodating learning style needs for ensuring that all learners receive equal teaching that will unleash their learning potential (Levinrad, 2000:14) (*cf.* 3.4). Furthermore, it can be concluded that their teaching practice is not in line with what inclusive education envisages, namely to support all learners so that the full range of learning needs can be met (SA, 1996a:21; SA, 2001:17; Rakholile, 2006:11) (*cf.* 2.2).

Against the background of the findings, it could be argued that the learners in the classrooms that took part in the study, might not benefit during teaching and learning, and could experience pedagogical barriers due to

an inflexible curriculum (SA, 2001:6, 16, 47; Mowes, 2002:42; Uys, 2005:405) (*cf.* 2.4.1). The learners' individual capacity and motivation to learn might be negatively affected because of being exposed to an inefficient learning process (Van Rensburg, 2002:136) (*cf.* 3.4). An ineffective learning process indicates infringements to learners' rights to quality education as stipulated by the Constitution (SA, 1996b:14) (*cf.* 2.2). If learners learning style needs are not accommodated, they will not be empowered in developing their individual strengths and their ability to participate critically in the process of learning will be affected. Furthermore, the maximizing of the participation of all learners and uncovering and minimizing barriers to learning is compromised (SA, 1996a:21; McGregor & Vogelsberg 1998:33; Salend, 1999:114; SA, 2001:16; Rakholile, 2006:11) (*cf.* 2.2). In addition to the aforementioned, if educators cannot accommodate diverse learning styles during teaching, learners could experience problems with concentration and internalizing and remembering information (Lovelace, 2005:176) (*cf.* 3.2). The mentioned findings are supported by findings from the observations, which made it clear that mainly three learning styles, namely Divergers (Watchers), Convergers (Sensors/Feelers) and Accommodaters (Doers) were accommodated during teaching and learning (*cf.* 5.4.1).

- Interview findings revealed that educators who took part in the study are apparently not completely familiar with the policy on Inclusive Education regarding ways of how to accommodate diverse learning style needs (*cf.* 5.3.3). The major findings indicated that educators separate learners into groups with fast and slow learners for which the difficulty level of the work is adapted, and use group work and mixed ability grouping to accommodate diverse learning styles (*cf.* Figure 5.3). The categorical grouping of the learners indicates a misconception regarding the meaning of learning style diversity (Du Plessis, 2007:35) (*cf.* 2.4). According to Lazarus *et al.* (2001:34), accommodating barriers to learning and development, expresses a commitment to the development of inclusive sites of learning to fostering inclusion of all learners within schools, with emphasis on accommodating the diverse needs of the learner population.

The instructional practices of the educators who took part in the study do not reflect a commitment to develop learning environments with an emphasis on accommodating diverse learner needs, which could imply that an important goal of an inclusive school, namely respecting diversity, might not be achieved (Lazarus *et al.,* 2001:45-68). According to the Department of Education (SA, 1997:3), Mowes (2002:42) and Du Plessis (2007:35) (*cf.* 2.4.1).

- The findings revealed that the educators do not use a variety of teaching methods and strategies in their classrooms to accommodate diverse learning styles. A strong emphasis on the use of Interactive, Direct and Indirect Teaching Methods by means of group work, discussions, worksheet completion, case studies, role-plays and lecturer presentations, was noted (*cf.* 5.3.3, 5.3.4, 5.4.2). The aforementioned methods and strategies mainly appeal to Accommodators (Doers), Convergers (Sensors/Feelers) and Divergers (Watchers). It appears that the educators are not exactly sure which methods are suitable for different learning styles (*cf.* 5.3.4). Based on the information in Table 5.9 (*cf.* 5.3.4), it became clear that the educators utilize a variety of teaching methods and strategies across their classrooms, but not in their individual classrooms. In particular, it appeared that the learning style preferences of Assimilators (Thinkers) were neglected during teaching (*cf.* 5.3.4, 5.4.2).

  Based on the findings that indicate that the educators who took part in the study do not use a variety of teaching methods and strategies, I conclude that only certain learners might benefit from teaching and teaching and achieve the outcomes of learning (Larkin-Hein, 2002:2; Van Rensburg, 2002:136; Schraw & Olafson, 2003:185; Schraw & Olafson, 2008:25-41) (*cf.* 1.1, 3.9). In support of Van Rooy (2006:105), I am also of the opinion that the learners will be disadvantaged, their interest and thinking will not be aroused, and they will not be stimulated to engage in further learning.

  One of the strategies for accommodating barriers to learning is the development of a flexible curriculum (Muthukrishna & Schoeman, 2000:315-335; Mowes, 2002:42; Uys, 2005:405) (*cf.* 2.4.1, 2.5). The

inability to develop a flexible curriculum could be related to some of the challenges reported by the educators, namely inadequate knowledge, and a lack of skills and training to implement inclusive education effectively. Linked to the aforementioned, a lack of knowledge regarding the methods and processes to be used in teaching, time constraints, heavy workloads and overcrowded classrooms magnify the challenges (*cf.* 2.4.3).

- The educators also did not plan and employ a variety of learning activities to accommodate diverse learning styles in their individual classrooms (*cf.* 5.3.5) (*cf.* Table 5.10). The interview data emphasized the use of independent, interactive and practical activities (*cf.* 5.3.5), which accommodate Assimilators (Thinkers), Accommodators (Doers) and Convergers (Sensors/Feelers). In contrast to the interview data, the observation data highlighted the fact that learning activities that focus on independent work were neglected, but supported the interview data in terms of the strong emphasis on interactive group activities (*cf.* 5.4.3). The aforementioned finding is not in line with the literature. A variety of learning activities is necessary in order to enhance learner motivation to perform such learning activities (Arndt & Underwood, 1990:30; Sutliff & Baldwin, 2001:270; Van Rensburg, 2002:182) (*cf.* 3.7). It appears as if the educators favour the use of particular activities instead of including a variety of activities in their classrooms.

- For the use of a variety of assessment approaches, the findings revealed that educators do not balance the use of assessment for and assessment of learning approaches when assessing diverse learning styles in their classrooms (*cf.* 5.3.6, 5.4.4). According to the interviews, the most frequently used assessment strategies were tests (educator assessment) and self-assessment, which are favoured by Convergers (Sensors/Feelers), Divergers (Watchers) and Assimilators (Thinkers) (*cf.* 5.3.6). On the other hand, the observations that pointed to an absence of assessment during teaching and learning, confirmed the popular use of tests as assessment strategy in one of the classrooms only (*cf.* 5.4.4). Peer assessment, group assessment and performance-based assessment

appear to be underutilized in all of the classrooms that took part in the research, which implies that Accommodors (Doers) do not receive opportunities to be assessed in their preferred ways. The findings in relation to the assessment approaches of the educators contradict the literature, where it is argued that assessment should reflect the application of a variety of assessment methods and strategies, and take place on a continuous, formative and summative basis (SA, 2007:7; Marnewick & Rouhani, 2007:268, 269) (*cf.* 3.8). Educators as key role-players in inclusive settings need to draw on various assessment strategies/techniques and develop the ability to use them effectively and appropriately (Maree & Fraser, 2004:51; SA, 2007:7; Dreyer, 2008:84) (*cf.* 3.8).

- Regarding the effect that the use of one particular teaching method, learning activity and approach to assessment on a constant basis can have the following findings are reported:
    - Using one teaching method on a constant basis can lead to a lack of understanding and participation during teaching and learning.
    - Lack of concentration and attention.
    - Teaching and learning will be experienced as boring and not enjoyable.
    - Performance and achievement will be influenced negatively (*cf.* Figure 5.4) (*cf.* 5.3.7-5.3.9).

The aforementioned findings support the literature where Larkin-Hein (2002:2) and Dasari (2006:27) (*cf.* 1.1) assert that the use of one method of teaching might not make it possible for learners to achieve expected Learning Outcomes. Although the educators appear to be aware of the negative effects of the use of one teaching method, their own teaching practice does not bear evidence of the use of a variety of teaching methods (*cf.* 5.3.4, 5.3.7, 5.4.1).

According to the educators' responses for the use of one type of learning activity on a constant basis, the findings relate to the following:

- Performance and achievement will be negatively affected.
- Lack of interest in teaching and learning.
- Class disruptions due to a lack of interest.
- A lack of participation (*cf.* Figure 5.5) (*cf.* 5.3.8).

As with the application of teaching methods the educators are also well aware of the negative effect of using one type of activity on a continuous basis, but their own teaching practice reflect an absence of a variety of learning activities (*cf.* 5.3.8). Against this background, the finding does not support the viewpoint of Arndt and Underwood (1990:30) and Van Rensburg (2002:12) (*cf.* 3.7) who advocate for a variety of learning activities to enhance learner motivation.

The educators' opinions related to the use of one type of assessment method on a continuous basis pointed to negative effects such as: discouraging diverse and independent thinking and affecting the quality of learner performance (*cf.* Figure 5.6) (*cf.* 5.3.9). Although the interviews indicated that educators make use of peer, group and self-assessment (*cf.* 5.3.6), the observations revealed an absence of assessment of learner progress towards the attainment of Learning Outcomes (*cf.* 5.4.4). This finding does not support the literature where it is argued that educators are expected to draw on a variety of assessment strategies (Maree & Fraser, 2004:51; Kramer, 2006:50; SA, 2007:7) (*cf.* 3.8.2).

- The educators' opinions regarding the use of different teaching methods and strategies, learning activities and assessment approaches to accommodate diverse learning styles were positive and negative (*cf.* 5.3.10-5.3.13). Positive responses indicated that the use of a variety of teaching methods and strategies, learning activities and assessment approaches will:
    - Make individualised thinking and achievement possible.

- A good approach that will accommodate and benefit all learners.
- Lead to better understanding and enjoyment.
- Will acknowledge the uniqueness of the learner.
- Will enhance learner interest and participation.
- Reduce educator workload by involving learners in assessment (*cf.* Figures 5.7-5.9).

The negative responses mentioned the following challenges related to accommodating diverse learners:

- Demanding in terms of an increase in workload and management.
- Time constraints, planning and marking.
- Overcrowded classrooms.
- The need to be guided to know how to accommodate diverse learner needs (*cf.* Figures 5.7-5.9).

Based on the findings, it cannot be conclusively argued that the educators are positive about accommodating diverse learning style needs, as a number of valid challenges were reported. The challenges reported by the educators augur well with the challenges that educators might face in inclusive classrooms. Some of these challenges reported by Schruggs and Mastropieri (1998:17-48), Swart *et al.* (2000:77), Hay *et al*. (2001:214), Hall (2002:34) and Akintola and Quinlan (2003:31), refer to: inadequate knowledge, skills and training to accommodate learning style diversity, heavy workload, overcrowded classrooms as well as more time to plan that pose stumbling blocks in the way of providing a flexible curriculum (*cf.* 2.4.3; 5.3.7, 5.3.8, 5.3.9).

In summary, the findings of my study support the findings of De Waal and Grosser (2009:705), namely that the teaching practices of the educators who took part in the study are not yet compatible with the diverse learning style

needs of learners. The danger of this is that teaching and learning environments will be created where certain learners will progress and enjoy learning, while others will struggle and not enjoy teaching and learning. The division among learners that will be created could lead to labelling of learners as slow and difficult or clever and dedicated (Du Plessis, 2007:35) (*cf.* 2.4.1). In support of De Waal and Grosser, (2009:705), I am concerned that if learners are labelled or categorized (slow/fast, good/poor achievers), as it appears to be in the classrooms that took part in the research, competency and learner performance will not be promoted.

The educators who took part in the study do not seem to be empowered to accommodate diverse learning style needs. In addition to workload, time constraints and overcrowded classes pose challenges to providing a flexible curriculum to learners (Schruggs & Matropieri, 1998:17-48; Abel & Sewell, 1999:287-299; Van Zyl & Pietersen, 1999:74-78; Hay *et al.,* 2001:214; Hunter & Williamson, 2001:87; Akintola & Quinlan, 2003:31) (*cf.* 2.4.3).

Finally, the educators who took part in the study might need to develop an own understanding of their epistemological beliefs and compare their own beliefs to other beliefs to acquire new ways of thinking about teaching, learning and assessment, and to become aware of how their beliefs affect their teaching practice (*cf.* 3.9). What is disconcerting at the moment, is the fact that it appears as if the educators find the adaptation of the curriculum problematic, and are therefore not protecting the best interest of the learners in terms of their pedagogical safety and security (De Waal & Grosser, 2009:698) (*cf.* 3.4).

It is important to mention that the problems detected with the accommodation of diverse learning styles, could possibly also be attributed to some of the biographical variables, namely teaching experience and qualifications (*cf.* Tables 5.3, 5.6, 5.8). Many of the educators have less than ten years teaching experience (n = 22), only six of the educators had more than six years teaching experience in Grade 4 Life Orientation classrooms, and twelve of the educators only have a three year teacher training diploma. I am of the opinion that a lack of teaching experience and teaching qualifications might

contribute to challenges in terms of having inadequate experience, knowledge and skills to adapt the curriculum for diverse learning style needs.

In the following section, I revisit the aim and objectives of the study in order to determine whether the literature review and empirical research contributed to the aim and objectives being achieved.

7.5 FINDINGS IN RELATION TO THE AIM AND OBJECTIVES OF THE STUDY

The overall aim of this study was to understand how educators deal with the demands made by accommodating diverse learning styles during teaching and learning in inclusive Grade 4 Life Orientation classroom settings. Based on the findings of the research, I designed examples of teaching, learning and assessment activities that form part of a teaching and learning programme to assist educators to accommodate the learning style needs in an inclusive Grade 4 Life Orientation classroom effectively. In this section, I endeavour to revisit the aim and objectives of the study in order to ascertain whether they have been achieved.

Objective 1: Determining the different learning style needs that educators need to accommodate during teaching in inclusive Grade 4 Life Orientation classrooms

This objective was achieved by means of a literature review. There are a number of learning style models, that link learning style needs to physiological aspects related to perceptual preference during learning (Kolb, 1984:199; Honey & Mumford, 1992:89; Schurr, 1994:45; Felder, 1996:20; Leider, 1997:35, 120); personality aspects related to the learner (Lawrence, 1994:89); stimuli imposed by the environment (Burke & Dunn, 2003:167); emotional and sociological factors (Lovelace, 2005:117); styles to process information (Gregorc, 1984:52; Riding & Dauglas, 1993:297-307; Felder, 1996:20); level of dependency during teaching and learning (Nieman & Pienaar, 2006:85-86); task functioning in the brain (Hermann, 1990:66); and intelligence (Armstrong, 2000:321; Gardner in Nieman & Pienaar, 2006:86) (*cf.* 3.3.13).

For the purpose of the study, learning style needs were conceptualized according to the learning style model of Kolb (1984:199), which emphasizes perceptual preferences during learning (*cf.* 3.3.1). Kolb's learning style model highlights four major learning style needs, namely: learners who prefer sensory learning, learners who favour observation and reflection during learning, and learners who enjoy abstract thinking and active experimentation (Kolb,1984:199; Little, 2004:8) (*cf.* 3.2.1).

Objective 2: Gauging educators' understanding of the different learning style needs of learners in inclusive Grade 4 Life Orientation classroom settings

This objective was achieved by analysing the data obtained from the focus group interviews and observation sessions. It was discovered that educators who took part in the study do not clearly understand diverse learning style needs in their classrooms (*cf.* 5.3.1). The educators *inter alia* linked learning styles to categories of learners, namely being fast or slow, introvert or extrovert and having different abilities. The educators correctly linked intelligences and different ways of learning to diverse learning style needs (*cf.* Figure 5.1). However, they provided limited examples of what exactly the learning preferences of learners entail. Throughout the observation sessions, it appeared that the educators who were observed are not aware of diverse learning style needs in their classrooms. In all the observation sessions, all five educators only accommodated Convergers (Sensors/Feelers), Divergers (Watchers) and Accommodators (Doers) (*cf.* 5.4.1). It became apparent that educators do not clearly understand what the different learning style needs entail, as the learning style needs of Assimilators (Thinkers) were underemphasized (*cf*. 5.3.3, 5.4.1).

Objective 3: Establishing the teaching methods and strategies, learning activities and assessment methods and strategies that could be utilized during teaching to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms

In order to achieve this objective, I was guided by the information in the literature. According to the literature review, there are four major teaching methods and their related strategies that will ensure that all learning style needs are accommodated in classrooms. The four major teaching methods are the Direct, Indirect, Independent and Interactive Teaching Methods (cf. Killen, 1998:106, 176, 104-110; Borich, 2003:221; Kramer, 2006:10; Mahaye & Jacobs, 2007:176-200, Ognibene, 2007:24-27; Philpott, 2009:38, 47) (*cf.* 3.6.1 – 3.6.3). Divergers (Watchers) and Convergers (Sensors/Feelers) prefer the use of the Direct Teaching Method as they will be able to learn through perception and observation (Killen, 1998:4-6; Monyai, 2006:107-112; Arends, 2009:290-295) (*cf.* 3.6.1, Table 3.7). Divergers (Watchers) and Assimilators (Thinkers) respectively enjoy the use of Indirect and Independent Teaching Methods, as they will be provided with opportunities to reflect on information and create understanding for themselves (Borich, 2003:221; Kramer, 2006:101) (*cf.* 3.6.2, Table 3.7). Accommodators (Doers) will learn effectively with Interactive Teaching Methods which will allow for interpersonal and active learning, which they prefer (Grosser & De Waal, 2006:21; Prashing, 2006:15) (*cf.* 3.10.2).

Learning activities need to provide learners with a variety opportunities for sensory experience, reflective observation, abstract conceptualization and active experimentation in order to accommodate all learning style needs (Kolb, 1984:199; Arndt & Underwood, 1990:30; Sutliff & Baldwin, 2001:270) (*cf.* 3.3.13; 3.7).

Maree and Fraser (2004:52), the Department of Education (SA, 2007:7) and Marnewick and Rouhani (2007:268, 269) (*cf.* 3.8; 3.10.4) argue for a continuous, formative and summative approach to assessment through the use of a variety of assessment methods and strategies that would reflect a balanced approach to accommodating assessment for and assessment of

learning in classrooms. Assessment of learning *inter alia* refers to traditional, summative, educator assessment whereas assessment for learning which is more formative in nature opens up possibilities for using group, self and peer assessment (Chappius & Stiggins, 2002:40-43; Stiggins, 2002:759-761; Davies & Waverly, 2005:1) (*cf.* 3.8.1, 3.8.2).

Convergers (Sensors/Feelers) and Divergers (Watchers) are best accommodated during objective educator assessment, and Assimilators (Thinkers) will enjoy self-assessment and educator assessment by means of subjective test items. Accommodators (Doers) will favour group and performance-based assessment (*cf.* Table 6.4).

Objective 4: Gaining a deeper understanding of the application of teaching methods and strategies utilized during teaching to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms

I achieved this objective by analysing the data obtained from the focus group interviews and observations. The focus group interview data and observations indicated a strong emphasis on the use of Interactive, Direct and Indirect Teaching Methods by means of group work, discussions, worksheet completion, case studies, role-plays and lecturer presentations, was noted (*cf.* 5.3.3, 5.3.4, 5.4.2). The aforementioned methods and strategies mainly appeal to Accommodators (Doers), Convergers (Sensors/Feelers) and Divergers (Watchers) (*cf.* Table 3.7) It is noteworthy to mention that it appeared that the learning style preferences of Assimilators (Thinkers) were neglected during teaching (*cf.* 5.3.4, 5.4.2).

Objective 5: Seeking clarity on the types of learning activities designed by educators to accommodate learning style diversity in inclusive Grade 4 Life Orientation classrooms

This objective was achieved by analysing the data obtained from the focus group interviews and the observations. The interview data emphasized the use of independent, interactive and practical activities (*cf.* 5.3.5), which accommodate Assimilators (Thinkers), Divergers (Watchers), Accommodators

(Doers) and Convergers (Sensors/Feelers). The observation data, however, created awareness of the fact that learning activities that focus on independent work were neglected. The interview data and the observation data supported a strong emphasis on interactive learning through the use of group activities (*cf.* 5.4.3).

Objective 6: Exploring the assessment approaches that educators utilize during teaching to accommodate diverse learning styles in inclusive Grade 4 Life Orientation classrooms

This objective was achieved by analysing the data obtained from the focus group interviews and the observations. The findings revealed that educators do not use a variety of teaching methods and assessment strategies, and do not balance the use of assessment for and assessment of learning approaches when assessing diverse learning styles in their classrooms (*cf.* 5.3.6, 5.4.4). The interviews revealed that the most frequently used assessment strategies were tests (educator assessment) and self-assessment, which are favoured by Convergers (Sensors/Feelers), Divergers (Watchers) and Assimilators (Thinkers) (*cf.* 5.3.6). Disconcertingly, the observations on the other hand pointed to an absence of assessment during teaching and learning, and confirmed the use of tests as assessment strategy in one of the classrooms only (*cf.* 5.4.4). No evidence of peer assessment, group assessment and performance-based assessment were found in any of the classrooms that took part in the research.

Objective 7: Exploring educator perceptions about accommodating learning style diversity in inclusive Grade 4 Life Orientation classrooms

This objective was achieved by analysing the data obtained from the focus group interviews. Positive and negative perceptions were noted among the responses of the educators. The positive responses emphasized the importance of accommodating learning style diversity for better understanding and enjoyment during teaching and learning and the fact that individualized teaching and learning will be made possible (*cf.* 5.3.10 - 5.3.13). The negative responses obtained focused on challenges that restrict the educators in

accommodating diverse learning style needs, namely time to plan, increase in workload that accommodating diverse learning style needs will bring, planning and marking a wide variety of learning and assessment tasks and a lack of knowledge about how to accommodate diverse learning styles (*cf.* 5.3.13).

Objective 8: Identifying components and processes to be included in examples for a teaching and learning programme to assist educators to accommodate diverse learning styles in an inclusive Grade 4 Life Orientation classroom.

The empirical study revealed that there is a need to develop a teaching and learning programme that could assist educators to accommodate diverse learning styles needs in an inclusive Grade 4 Life Orientation classroom. The components and processes included in the teaching and learning programme corresponded with the components and processes of the experiential learning cycle of Kolb (1984:199) (*cf.* 3.3.13). According to the experiential learning cycle, the components and processes refer to teaching, learning and assessment that should provide opportunities for sensory experience, reflective observation, abstract conceptualization and active experimentation.

The programme has been designed and provides examples to educators on how to link a variety of teaching methods and strategies, learning activities and assessment approaches to diverse learning styles in order to achieve Learning Outcomes.

7.6 LIMITATIONS OF THE STUDY

A number of limitations have been identified for the research.

- The sample used in the study was only bound to the one education district, the Sedibeng West District of the Gauteng Department of Education. Therefore, the results of this study cannot be generalized to other Districts.

- Only qualitative research was employed in the study. To obtain a more holistic and comprehensive understanding of accommodating diverse learning style needs in the Life Orientation classroom settings, quantitative

research should be employed in conjunction with the qualitative research. The quantitative research can determine in greater detail educators' levels of knowledge regarding accommodating diverse learning styles, their perceptions and attitudes related to teaching that will accommodate learner preferences, and the frequency and extent to which diverse learning style needs are presently accommodated.

- The research was only conducted with educators. Richer data could have been obtained if learner responses regarding the extent, to which their learning style needs are accommodated, were collected.

- As a novice researcher, I acknowledge that I could have made better use of probing during the focus group interviews to obtain more depth in the responses of the participants. In this regard, I *inter alia* could have used probing to find out what the participants meant with indicating that learning styles refer to a *"method of learning"* (*cf.* C274) and are "*different styles of learning"* (*cf.* C278). Furthermore, I did not request the participants to explain exactly what they meant with *"accommodating all learners in the classroom"* (*cf.* C286).

- More and continuous observations are needed to track the achievement of Learning Outcomes over a longer period to conclusively conclude that the educators who took part in the study do not accommodate diverse learning style diversity in their classrooms.

7.7 RECOMMENDATIONS

In the light of the findings of the empirical research and the literature review, I make the following recommendations to assist educators to accommodate diverse learning style needs in inclusive Grade 4 Life Orientation.

Learning styles

Based on the focus group interview responses as well as the data obtained for the observations (*cf.* 5.3.1, 5.4.1) that revealed that educators are not familiar with the variety of learning styles among learners, I recommend the following:

In-service training or additional workshops arranged by the Department of Education, is needed to familiarize educators with the theoretical and practical aspects of accommodating various learning style needs during teaching (*cf.* 6.2). It is imperative for educators to understand that concern for learners should be the foundation of all teaching (Gunter *et al.,* 2003:3) (*cf.* 3.4). Therefore, they have to make efforts to familiarize themselves with the diverse learning style needs in order to improve their knowledge and understanding of ways to accommodate different learners in their Life Orientation classrooms (*cf*. 3.3.1 – 3.3.10). This will enable many learners to learn new and difficult information better when educators capitalize on learners' learning styles (Smith, 2002:64; Lovelace, 2005:177) (*cf.* 3.2).

Educators need to be made aware of the importance of providing experiential learning in their classroom (Kolb, 1984:199) (*cf.* 3.1.1), in order to make learning meaningful and effective to all learners (*cf.* 3.1.13). Experiential learning is built on the premise that all learners are exposed to all the different ways of learning (sensory experience reflective observation, abstract conceptualization and active experimentation), irrespective of their own learning preferences (Felder, 1996:18) (*cf*. 3.9).

Greater awareness should be created among educators regarding the importance of learning style needs for improving learner interest and motivation to learn, to experience success, to increase learners' capacity to learn and to avoid frustration due to inefficient learning processes (cf. 2.4.3, 3.2). Educators should be made aware of the fact that learners can learn new and difficult information better when they capitalize on their learning styles (Lovelace, 2005:177) (*cf*. 3.2).

Teaching methods and strategies

The interview and observation results indicated that the educators who took part in the research need guidance on how to incorporate a variety of teaching methods and strategies during teaching (*cf.* 5.3.4, 5.4.2). Educators should firstly become acquainted with the different epistemological beliefs that underpin teaching practice; secondly, they need to recognise the effect that

the epistemological beliefs have on teaching practice (*cf.* 3.9). Finally, they need to examine their own epistemological beliefs that underpin their teaching practice and identify ways of accommodating a variety of epistemological beliefs to underpin their classroom teaching, learning and assessment (Schraw & Olafson, 2003:186; Chan, 2008:264; Muis & Sinatra, 2008:137-150) (*cf*. 3.9).

Knowledge of the different epistemological beliefs could empower educators to make better-informed decisions about how to provide a flexible curriculum that would meet the needs of all learners in their classrooms.

Educators should become acquainted with the use of different teaching methods (Direct, Indirect, Interactive and Independent) and their related strategies, how they can be applied to accommodate diverse learning styles, and how applying a variety of teaching methods and strategies will enable educators to provide experiential learning in their classrooms (*cf.* 3.6.2, 3.6.4). It is important that educators understand that no single teaching method is effective for all learners (Dunn & Giggs, 2000:29) (cf. 3.3.2). Learning should be made comfortable for each learner by considering a variety of teaching methods and strategies.

Learning activities

The findings of the research revealed that the educators, who took part in the study provide limited opportunities for learners to become involved in learning activities that accommodate their learning style preferences (*cf.* 5.3.5, 5.4.3). In this regard, I recommend the following:

Educators have a responsibility to make efforts to design and implement different learning activities in their inclusive Life Orientation classrooms, as this will have an effect on how the learner performs during different learning activities. Greater care should be taken with organizing the teaching and learning environment in such a way that it enhances and provides different learning activities that match the learner's learning styles (Van Rensburg, 2002:179) (*cf.* 3.7). In order to achieve the aforementioned, in-service training or workshops need to be arranged by the Department of Education in

conjunction with Higher Education Institutions to assist educators to make their teaching and learning environments more flexible. Furthermore, the teaching and learning programme that the educator designed can be utilised to equip educators with the theoretical and practical aspects related to teaching diverse learning styles.

Assessment methods and strategies

The research findings pointed to the absence of diversity in the assessment of learners (*cf.* 5.3.6, 5.4.4). Educators need to employ different assessment approaches in their classrooms to accommodate all learning style needs in their classrooms (Maree & Fraser, 2004:51; Kramer, 2006:50; SA, 2007:7) (*cf.* 3.8). It is crucial that educators understand and implement the policy on inclusive education in order to respect the differences among all learners and capitalize on similarities. In order to implement assessment to accommodate the needs of all learners, a thorough understanding of assessment for and assessment of learning is necessary. Balancing assessment for and assessment of learning approaches in the classroom will enable educators to accommodate diverse learner needs (Mayer, 2002:226-232; Stiggins, 2002:761-762; Davies & Waverly, 2005:1) (*cf.* 3.8.1, 3.8.2).

Accommodating challenges

In order to support the educators to accommodate diverse learning style needs effectively, which is central to the implementation of the inclusive education policy, the Department of Education should pay serious attention to the concerns voiced by the participants (*cf.* 5.3.7 – 5.3.12). The participants are willing to provide a flexible curriculum to learners, but find it demanding against the background on an already heavy workload, large learner numbers in class, a lack of time to prepare for curriculum adaptations and a need for support and guidance on how to provide a flexible curriculum (*cf.* 5.3.13). It seems inevitable that urgent support from the Department of Education is required to assist educators to implement the ideals of inclusive education, by providing additional in-service or workshop training, to equip educators with a good working knowledge of inclusive education (Swart & Pettipher, 2005:19-

20; Uys, 2005:406) (*cf.* 2.4.2). It is important that the training addresses theoretical and practical aspects of accommodating diverse learning style needs during teaching, learning and assessment. The curriculum-based teaching and learning programme that was designed in the context of the study could be used to provide educators with practical examples of how to go about adapting the curriculum to accommodate all learner preferences.

7.8 SUGGESTIONS FOR FURTHER RESEARCH

This study has made me aware of the importance of accommodating diverse learning style needs in inclusive Grade 4 Life Orientation classroom settings. Furthermore, the research findings indicated that the ideal of providing a flexible curriculum to learners is not yet a reality in the classrooms that were involved in the research. Suggestions to deal effectively with accommodating learning style diversity in South African classrooms can only be made if extensive research on this topic could be done. The following suggestions are made for further research:

- Further research could be done in other Districts and other Provinces in South Africa in order to understand diverse perceptions of accommodating diverse learning style needs in inclusive Life Orientation classrooms, settings as well as in other Learning Area settings.

- Research can be undertaken to explore how educators in Ex model-C schools in the D8 District of the Gauteng Department of Education deal with learning style diversity in their classrooms, in order to establish whether they also find it problematic.

- It is important to hear the learners' voices as well, therefore research should include learners' perceptions of whether and how their learning preferences are accommodated in the inclusive Life Orientation classroom settings.

- Research that documents the relationship between educators' epistemological and ontological beliefs and present classroom practices will help to clarify the reasons for the decisions that educators make

regarding the choice of teaching methods and strategies, learning activities and assessment approaches.

- A study could be done to determine the impact that the accommodation of diverse learning style needs has on academic achievement and motivation to learn.

- Research can be conducted with larger groups of educators and learners utilizing a quantitative approach (questionnaires) in addition to a qualitative approach. The quantitative approach can place a stronger emphasis on the frequency and extent to which learning style needs are accommodated.

7.9 CONTRIBUTION OF THE STUDY TO THEORY

In the absence of extensive research related to **how** learning style needs are accommodated in general in the South African teaching and learning context, the present research provides a starting point that can be extended by future research. The only studies that attempted to research how well diverse learning style needs are accommodated in South African classrooms, are the studies of Grosser and De Waal (2006), Maja (2006) and De Waal and Grosser (2009).

The research results of the present study indicate that understanding of what learning style diversity implies, as well as accommodating learning style diversity in Grade 4 Life Orientation appear to be a problematic issue in the Sedibeng-West District of the Gauteng Department of Education. The research results could be related to educators' lack of knowledge regarding learning style needs and how to accommodate them, or due to heavy workloads, which leave very little time to plan for the accommodation of learning style diversity. After the examination of the thesis, I will communicate the findings of the research to the research participants and the Department of Education in order to create awareness for the urgency of assisting educators to cope with what is expected of them in terms of addressing the pedagogical needs of learners.

The findings of this research supports the findings of a study conducted by Grosser and De Waal (2006:17-32), Maja (2006:190, 191) and De Waal and Grosser (2009:697-706), where similar findings were reported for a variety of classrooms in the Sedibeng-East District of the Gauteng Department of Education and the Lejweleputswa District in the Free State Province, respectively.

My research also extends the research conducted by Gifford (2004), Kise (2004) and Maja (2006) by demonstrating that it is possible to design teaching, learning and assessment activities that are based on a variety of epistemological beliefs. The examples are included as part of a curriculum-based teaching and learning programme for Grade 4 Life Orientation, and illustrate to educators how to link classroom practice to learning style needs in the South African context (*cf.* 1.1).

7.10 CONTRIBUTION OF THE STUDY TO PRACTICE

Against the background of limited evidence of research studies that document the practical accommodation of learning style needs in national and international classrooms, as well as the absence of curriculum-based teaching and learning programmes that guide educators in creating teaching and learning experiences that accommodate diverse learner needs, my research makes a contribution to practice. The teaching and learning programme that was designed provides educators with an instrument that could be used as a guideline to determine and understand learning style needs in their classrooms, and to plan for accommodating diverse learning style needs in their Life Orientation classrooms in future.

The teaching and learning programme is furthermore generic in nature, and could be utilised to assist educators in other Learning Area or Subject Fields in dealing with learning style diversity. The new subject Life Skills in the primary phase (Department of Basic Education, 2011:8) deals with the holistic development of the learner throughout childhood, and focuses on Physical, Intellectual, Personal, Emotional and Social development. As the developed programme focuses on Health Promotion and Personal Development as part

of the Learning Area Life Orientation, which links well with what is envisaged in Life Skills, the designed examples in the programme can also be utilised by Life Skills teachers to enable them to address diverse learning style needs in their classrooms.

7.11 CONCLUSION

Every learner has unique abilities and talents. It is the responsibility of educators to recognize, acknowledge and cater for all learners in order to promote learner performance and competency, and avoid pedagogical barriers being created. The accommodation of diverse learning styles needs in an inclusive Life Orientation classroom setting is a challenging task. However, accommodation of diverse learning style needs is not an option, but the responsibility of every educator. If educators do not accept this responsibility, the ideals of inclusive education might remain ideals and not translate into classroom practice.

BIBLIOGRAPHY

ABEL, M.H. & SEWELL, J. 1999. Stress and burnout in rural and urban secondary school educators. *The journal of education research*, 92:287-29

AKINTOLA, O. & QUINLAN, T. 2003. Report of the scientific meeting on the empirical evidence for the demographic and socio-economic impact of HIV/AIDS. University of Natal, Durban, 26-28 March.

ALANT, E. & HARTY, M. 2005. Early childhood intervention. (*In* Engelbrecht, P., Green, L., Naicker, S. & Engelbrecht., *eds.* Inclusive Education in South South Africa. Pretoria. Van Schaik. p. 79-93.)

ARENDS, R.I. 2009. Learning to teach. 8th edition. Boston: McGraw-Hill.

ARMSTRONG, S.J. 2000. The influence of individual cognitive style on performance in management education. *Educational psychology*, 20:323.

ARNDT, M.J. & UNDERWOOD, B. 1990. Learning style theory and patient education. *The journal of continuing education,* 21(1): 28-31.

ARTER, J.A., & BUSICK, K.U. 2001. Practice with student-involved classroom assessment. Portland: Assessment Training Institute.

ASSESSMENT REFORM GROUP. 1999. Assessment for learning: beyond the black box. Cambridge, UK: University of Cambridge.

AVRAMIDIS, E., BAYLISS, P. & BURDEN, R. 2000. Educational psychology. London: Macmillan.

BABANE, C.V. 2002. Children's' experience of epilepsy: a case study. Pretoria: UNISA. (Dissertation – MEd.)

BABBIE, E. & MOUTON, J. 1995. The practice of social research. 7th edition. Belmont: Wadsworth Publishing Company.

BABBIE, E. & MOUTON, J. 2002. The practice of social research. Cape Town: Oxford University Press.

BAROOTCHI, N. & KESHAVARZ, M.H. 2002. Assessment of achievement through portfolios and teacher-made tests. *Educational research,* 44(3):279-288.

BELKNAP, M., ROBERTS, R. & NYEWE, K. 1999. Informal sources of learning support. (*In* Engelbrecht, P., Green, L., Naicker, S. & Engelbrecht, L., *eds.* Inclusive education in action in South Africa. Pretoria: Van Schaik. p. 168-189.)

BLACK, P., HARRISON, C., LEE., MARSHALL, B. & WILLIAM, D. 2004. Working inside the black box: assessment for learning in the classroom. *Phi Delta Kappan*, 86(1):8-21.

BLANCH, M.T. & DURRHEIM, K. 1999. Research in practice. Applied methods for social sciences. Cape Town: University of Cape Town Press.

BORICH, G.D. 2003. Observation skills for effective teaching. 4th edition. New York: Merril Prentice Hall. 303p.

BOTHA, C., CARSTENS, M., STAPLES, H. & VERCUIL, P. 2009. Spot on Life Orientation. Teacher's guide Grade 4. Johannesburg: Heinemann Publishers.

BURDEN, P.R. & BYRD, D.M. 2003. Methods for effective teaching. Meeting the needs of all students. 5th edition. London: Pearson Education.

BURKE, K. & DUNN, R. 2003. Learning style-based teaching to raise minority student test scores. There's no debate. *The Clearing House*, 76(2):103-106.

BURRIS, S., KITCHEL, T., MOLINA, Q., VINCENT, S. & WARNER, W. 2008. The language of learning styles. Research report. *Techniques:* 44-49, February.

CAPEL, S., LEASK, M. & TURNER, T. 2003. Learning to teach in the secondary school. London: Routledge.

CEKISO, M.P. 2000. The relationship between student learning styles and performance on ESL tasks. Potchefstroom: Potchefstroom University for Christian Higher Education. (Dissertation – M.A.)

CSIE ***see*** Centre for Studies on Inclusive Education.

CENTRE FOR STUDIES ON INCLUSIVE EDUCATION. 1997. Inclusive education. A framework for change. National and international perspectives. London: Expression Printers.

CHAANE, M.E. 2002. Pedagogical relevancy of inclusive education in the Foundation Phase of education. Mamelodi: Vista University. (Dissertation – M.Ed.)

CHAN, K. 2008. Epistemological beliefs, learning and teaching. The Hong Kong cultural context (*In* Khine, M.S., ed. Knowing, knowledge and beliefs. Epistemological studies across diverse cultures. Australia: Springer Verlag. p. 257-272.)

CHAPMAN, C. & GREGORY, G. 2002. Differentiated instructional strategies. one size does not fit all. Thousand Oaks, CA.: Corwin Press.

CHAPPIUS, S., & STIGGINS, R.J. 2002. Classroom assessment for learning. *Educational leadership*, 60(1), 40-43.

CHO, M. & FORDE, E. 2001. Designing teaching and assessment methods for diverse student Populations. *International journal of art and design education*, 20:86-95.

CLOETE, D.J. 2005. Fasilitering van leerstyle en meervoudige intelligensies tydens groepwerk en koöperatiewe leer in hoër onderwys. Pretoria: Universiteit van Pretoria. (Verhandeling: M.Ed.)

COHEN, L., MANION, L. & MORRISON, K. 2000. Research methods in Education. 5th edition. New York: Routledge Falmer.

COHEN, L., MANION, L. & MORRISON, K. 2007. Research methods in Education. 6th edition. New York: Routledge Falmer.

CONNER, K.G. 2003. Mind mapping: a graphic means of accommodating differing learning styles in the ESL classroom. Arizona: Arizona State University. (Dissertation – M.A.)

CRESWELL, J.W. 2009. Research design. Qualitative, quantitative and mixed methods approach. 3rd edition. California: Sage Publications.

CUTHBERT, P.F. 2005. The student learning process: learning styles or learning approaches? *Teaching in higher education,* 10(2):235-249.

DAANE, C.J., BEIRNE, S. & LATHAN, D. 2000. Administrators' and educator perceptions of the collaborative efforts of inclusion in the elementary grades. Pretoria: Van Schaik.

DASARI, P. 2006. The influence of matching teaching and learning styles on the achievement in science of Grade six learners. Pretoria: UNISA. (Dissertation – M.Ed.)

DAVIES, M.A. & WAVERLY, 2005. Alternative assessment: new directions in teaching and learning. *Contemporary education*, 71(1):1-8.

DAVIS, S.E. 2007. Effects of motivation, preferred learning styles, and perceptions of classroom climate on achievement in ninth and tenth grade math students. (Thesis – PhD.)

DEPARTMENT OF BASIC EDUCATION ***see*** SOUTH AFRICA. Department of Basic Education.

DEPARTMENT OF EDUCATION ***see*** SOUTH AFRICA. Department of Education.

DE WAAL, E. & GROSSER, M.M. 2009. Safety and security at school: A pedagogical perspective. *Teaching and educator education*, 25:697-706.

DREYER, J.M. 2008. The educator as assessor. Pretoria: Van Schaik.

DONALD, D., LAZARUS, S. & LOLWANA, P. 2002. Educational psychology in social context. 2nd edition. Cape Town: Oxford University Press.

DUNBAR-KRIGE, H. & VAN DER MERWE, M. 2010. The educator as an agent of inclusivity. (*In* Conley, L., De Beer, JJ., Dunbar-Krige, H., Du Plessis, E., Gravett, S., Lomofsky, L., Merckel, V., November, I., Osman, R., Petersen, N., Robinson, M. & Van der Merwe, M. Becoming an educator. Cape Town: Heinemann Publishers. p. 161-182.)

DUNN, R. & GIGGS, S.A. 2000. Practical approaches to using learning styles in higher education. West Porr, CT: Bergin and Garvey.

DU PLESSIS, P. 2007. What should we look like? The inclusion debate. *Naptosa insight,* 1(1):6-35.

DU PLESSIS, P., CONLEY, L. & DU PLESSIS, E. 2007. Teaching and learning in South African schools. Pretoria: Van Schaik.

DU TOIT, L. 1996. An introduction to specialized education. (*In* Engelbrecht, P., Kriegler, S.M. & Booysen, M.I., *eds*. Perspectives on learning difficulties: international concerns and South African realities. Pretoria: Van Schaik. p. 5-19.)

DU TOIT, L. 2001. Education for all departments of educational studies. Study guide OSN 421-Q. Pretoria: UNISA.

DYSON, A. 2001. Varieties of inclusion. Paper presented at the conference, in Jornadas Cientificas de Investigacion sobre Personas con Discapacidad. Salamanca, Spain, 17-19 March.

DYSON, A. & FORLIN, C. 1999. An international perspective on inclusion. (*In* Engelbrecht, P., Green, L., Naicker, S., Engelbrecht, L., *eds*. Inclusive education in action in South Africa. Pretoria: Van Schaik. p. 24-42.)

ENGELBRECHT, P., GREEN, L., NAICKER, S. & ENGELBRECHT, L. 1999. Inclusive education in action in South Africa. Pretoria: Van Schaik.

ESTERBERG, KG. 2002. Qualitative methods in social research. Pretoria: Van Schaik.

FELDER, R. 1996. Matters of Style. *PRISM: American society for engineering education*: 18-21.

FELDER, R.M. & SILVERMAN, L. 1988. Learning and teaching styles in education. *Engineering education*, 78: 674-681.

FLORIAN, L., ROSE, R. & TILSTONE, C. 1998. Promoting more inclusive practice. (*In* Tilstone, C,. Florian, N. & Rose, R., *eds*. Promoting inclusive practice. London: Routledge Falmer. p. 1-9.)

FREDERICKSON, N., & CLINE, T. 2002. Special education needs, inclusion and diversity: a textbook. Buckingham: Open Press.

GAUSS, S. 2002. Personality, associated learning styles and academic performance of third year psychology students. Port Elizabeth: University of Port Elizabeth. (Dissertation – M.A.)

GIFFORD, B.L. 2004. Educator beliefs, learning styles, and technology implementation in rural, secondary classrooms in Massachusetts. Rhode Island: Johnson & Wales University. (Thesis – Ed.D.)

GILBRIDE, D. 1998. Parental attitudes toward their child with a disability: Implications for rehabilitation counsellors. *Asia pacific disability rehabilitation journal,* 9(1): 1-12.

GOLIBER, T. 2000. Exploring the implications of the HIV/AIDS paramedic for educational planning in selected African countries: the demographic question. Washington, DC: The Future Group International.

GREEFF, M. 2002. Information collection: interviewing. (*In* De Vos, A.S., *ed.* Research at grass roots. For the social sciences and human service professions. 3rd ed. Pretoria: Van Schaik. p. 341-374.)

GREEN, L. 2001. Theoretical and contextual background. (*In* Engelbrecht, P. & Green, L., *eds.* Promoting learner development: preventing and working with barriers to learning. Pretoria: Van Schaik. p. 3-16.)

GREGORC, A.F. 1984. Style as a symptom: a phenomenological perspective. *Theory into practice,* 23(1):51-55.

GROSSER, M.M. 2001. Teaching and learning styles. Outcomes Based Training Manual. Vanderbijlpark: Potchefstroom University for CHE.

GROSSER, M.M. & DE WAAL, E. 2006. Enhancing pedagogical needs and fundamental rights at school by accommodating diverse learning styles. *Education as change,* 10(2):17-32.

GUNTER, M.A., ESTES, T.H. & SCHWAB, J. 2003. Instruction – a models approach. 4th edition. Boston: Allyn & Bacon.

GUNTER, M.A., ESTES, T.H. & MINTZ, S.L. 2010. Instruction – a models approach. 5th edition. Boston: Pearson Education.

HALL, R. 2002. Implementing inclusive educational practices through partnerships. *South African journal of higher education,* 16(3):31-37.

HARRIS, A.B. & SCHUBERT, J.G. 2001. Defining "quality" in the midst of HIV/Aids: ripple effects in classrooms. Paper presented at the 44th annual meeting of the Comparative and International Society, Washington, DC.

HAY, J.F., SMIT. J. & PAULSEN, M. 2001. Educator preparedness for inclusive education. *South African journal of education*, 21(4):213-218.

HEMMINGSON, H. & BORELL, L. 2000. Accommodating needs and student-environment in upper secondary schools for students with severe physical disabilities. *Canadian journal of occupational therapy*, 67(3):162-170.

HEMMINGSON, H. & BORELL, L. 2002. Environmental barriers in mainstream schools. *Child care, health and development*, 28(1): 57-63.

HENNING, E., VAN RENSBURG, W. & SMITH, B. 2004. Finding your way in qualitative research. Pretoria: Van Schaik.

HEPBURN, A.E. 2001. Primary education for Eastern and Southern Africa. Report prepared for the United States agency for international development

for displaced children and orphans fund. Duke University: Terry Sanford Institute of Public Policy.

HERMANN, N. 1990. The creative brain. Lake Lure, North California: Brain Books.

HOBERG, S.M. 1999. Education management, research methodology. Study guide 2 Medem 2 R. Pretoria: UNISA.

HOM, M.R. 2002. Educator accommodation of gender learning and problem-solving styles in the computer classroom. California: University of San Francisco. (Thesis – Ed.D.)

HONEY, P. & MUMFORD, A. 1992. The manual of learning styles. Maidenhead: Peter Honey Publishers.

HONIGSFELD, A.M. 2005. A comparative analysis of the learning styles of adolescents from diverse nations by age, gender, academic achievement and nationality. New York: St. John's University. (Thesis – Ed.D.)

HUNTER, S. & WILLIAMSON, J. 2001. Children on the brink. Strategies to support children isolated by HIV/Aids. Paris: USAID

IVANKOVA, N.V., CRESWELL, J.W. & PLANO CLARK, V.L. 2007. Foundations and approaches to mixed method research (*In* Maree, K., *ed.* First steps in research. Pretoria: Van Schaik. p. 254-257.)

JACOBS, D. 2007. Millennium Life Orientation. Grade 4 learner's book. 4th edition. Wierda Park: Action Publishers.

KELLY, M. 2000. Planning for education in the context of HIV/AIDS. Paris: UNESCO International Institute for Education Planning.

KILLEN, R. 1998. Effective teaching strategies. Lesson from research and practice. 2nd edition. Wentworth Falls, New South Wales: Social Science Publishers.

KISANJI, J. 1999. Historical and theoretical basis of inclusive education. Key note address for the workshop on “Inclusive Education” in Namibia: The challenge for teacher education. Windhoek, Namibia. 24-25 March 1999.

KISE, J.A.G. 2004. Long underwear in the tropics: a case study of a team of educators, reflective practice, learning styles and classroom climates. Minnesota: University of St. Thoma. (Thesis - Ed.D.)

KLEINERT, H., McGREGOR, V., BLANDFORD, T., JONES, K., OWENS, J., HARRISON, B. & MIRACLE, S. 2004. Service-learning opportunities that include students with moderate and severe disabilities. *Teaching exceptional children,* 37(2):28-34.

KOLB, D.A. 1981. Learning Style Inventory. Boston, Massachusetts: McBer and Company.

KOLB, D.A. 1984. Experiential learning: experience as a source of learning and development. Englewood Cliffs, NY: Prentice Hall.

KRAMER, D. 2006. OBE Teaching Toolbox. OBE strategies, tools and techniques for implementing Curriculum 2005. Florida Hills: Vivlia Publishers & Booksellers (Pty) Ltd.

KRUEGER, R.A. 2003. Designing and conducting focus group interviews. University Minnesota. Thousand Oaks, CA.: Sage Publications.

KRUGER, N. 1998. About the heart of the educator, in Psychology for teaching and learning. Johannesburg: Heinemann Publishers.

KRUGER, N. & ADAMS, H. 2002. Psychology for teaching and learning. What teachers need to know. Sandton: Heinemann Higher and Further Education (Pty) Ltd.

KYRIACOU, C. 1998. Educator stress: Past and present. (*In* J. Dunham, J. Varma, J., *eds.* Stress in educators. London: Whurr Publishers. p. 77-102.)

LANDSBERG, E. 2005. Learning Support. (*In* Landsberg, E., Kruger,D. & Nel, N., *eds.* Accommodating barriers to learning. A South African Perspective. Pretoria: Van Schaik. p. 61-77.)

LARKIN-HEIN, T. 2000. Learning styles in introductory Physics: enhancing student motivation, interest and learning. International conference on engeneering and computer education, Sao Paulo, Brazil.

LAWRENCE, G. 1994. People types and tiger stripes. 3rd edition. Gainesville: Gainesville Centre for Applications of Psychological Type.

LAZARUS, S., DANIELS, B. & ENGELBRECHT, L. 2001. The inclusive school. (*In* Engelbrecht, P., Green, L., Naicker, S. & Engelbrecht, L., *eds.* Inclusive education in action in South Africa. Pretoria: Van Schaik. p. 45-68.)

LE GRANGE, L. & REDDY, C. 1998. Continuous assessment. An introduction and guidelines to implementation. Cape Town: Juta.

LEEDY, P.D. & ORMROD, J.E. 2005. Practical research: planning and design. 8th edition. New Jersey: Merrill Prentice Hall.

LEEDY, P.D. & ORMROD, J.E. 2010. Practical research: planning and design. 9th edition. New Jersey: Merrill Prentice Hall.

LEIDER, R.J. 1997. The power of purpose, creating meaning in your life and work. San Francisco, CA.: Berrett Koehler Publishers, Inc.

LEVINRAD. L. 2000. Trends in learning styles amongst black and white South African learners in a multicultural classroom. Johannesburg: University of the Witwatersrand. (Dissertation – M.Ed.)

LIGHTFOOT, J., WRIGHT, S. & SLOPER, P. 1999. Supporting pupils in mainstream school with an illness or disability: young people's views. *Child care, health and development,* 25(4):267-283.

LINCOLN, Y.S. & GUBA, E.G. 1985. Naturalistic inquiry. California: Sage Publications.

LIPSKY, D.K. & GARTNER, A. 1997. Inclusion and school reform: transforming America's classrooms. London: Paul H. Brookes.

LITTLE, L. 2004. Lessons in Leadership. Pretoria: University of South Africa. (Thesis – PhD.)

LOMOFSKY, L. & LAZARUS, L. 2001. First steps in the development of an inclusive education system. *Cambridge journal of education,* 31(3):304-316

LOVELACE, M.K. 2005. Meta-analysis of experimental research based on the Dunn and Dunn Model. *Journal of educational research*, 98(3):78-183.

MABENA, S.P. 2004. Teaching strategies used in an inclusive primary school classroom. A case study. Johannesburg: Rand Afrikaans University (Dissertation – M.Ed.)

MAHAYE, T. & JACOBS, M. 2007. Teaching methods. (*In* Jacobs, M., Vakalisa, N. & Gawe, N.C.G., *eds*. Teaching-learning dynamics. A participative approach for OBE. 3rd edition – fourth impression. Cape Town: Heinemann Publishers. p. 175-200.)

MAJA, R. 2006. A teaching and learning programme to address learning style diversity in the Natural Sciences at secondary school level. Vanderbijlpark: North-West University. (Thesis – PhD.)

MALE, D.B. & MAY, D. 1997. Stress, burnout and workload in educators of children with special educational needs. *British journal of special education,* 24:133-140.

MAREE, T. 2000. Analysis and classification of learning styles of first year commercial-education students at the Technikon Northern Gauteng. Pretoria: Technikon Northern Gauteng. (Dissertation – M.Tech.)

MAREE, K. & VAN DER WESTHUIZEN, C. 2007. Planning a research proposal. (*In* Maree, K., *ed.* First steps in research. Pretoria: Van Schaik. p. 33-34.)

MAREE, J.G. & FRASER, W.J. 2004. Outcomes-based assessment. Sandown, Parklane: Heinemann Publishers.

MARNEWICK, l. & ROUHANI, S. 2007. (*In* Jacobs, M., Vakalisa, N. & Gawe, N.C.G., *eds*. Teaching-learning dynamics. A participative approach for OBE. 3rd edition – fourth impression. Cape Town: Heinemann Publishers. p. 268-278.)

MAYER, R.E. 2002. Rote versus meaningful learning. *Theory into practice,* 41(4):226-232.

MCGRAW, M.B. 2005. Differences in learning style preference among students of diverse ethnicities, gender, academic placement level, and academic achievement. Phoenix: University of Phoenix. (Thesis – Ed.D.)

MCGREGOR, G. & VOGELSBERG, R.T. 1998. Inclusive schooling Practices: pedagogical and research foundations. A synthesis of the literature that informs best practices about inclusive schooling. Montana: Brookes Publishing.

MCMILLAN, J.H. & SCHUMACHER, S. 1997. Research in education. A conceptual introduction. 4th edition. New York: Collins College Publishers.

MCMILLAN, J.H. & SCHUMACHER, S. 2001. Research in education. A Conceptual introduction. 5th edition. New York: Longman Education Inc.

MCMILLAN, J.H. & SCHUMACHER, S. 2006. Research in education. Evidence-based inquiry. 6th edition. New York: Pearson Education.

MERRIAM, S.B. 2009. Qualitative research. A guide to design and implementation. San Francisco: Jossey Bass.

MITTLER, P. 2000. Working towards inclusive education: social context. London: David Fulton Publishers.

MONYAI, R.B. 2006. Teaching strategies. (*In* Nieman, M.M. & Monyai, R.B., *eds.* 2006. The educator as mediator of learning. Pretoria: Van Schaik. p. 104 - 135.)

MORGAN, D.L. 1997. Focus groups as qualitative research. London: Sage Publications.

MOŴES, A.D. 2002. The views of educators regarding inclusive education in Namibia. Stellenbosch: University of Stellenbosch. (Thesis – PhD.)

MTSHALI, M. 2005. Guidelines for educators to support learners with epilepsy in the inclusive classroom. Pretoria: UNISA. (Dissertation – M.Ed.)

MUIS, K.R., & SINATRA, G.M. 2008. University cultures and epistemological beliefs. Examining differences between two academic environments. (*In* Khine, M.S., *ed.* Knowing, knowledge and beliefs. Epistemological studies across diverse cultures. Australia: Springer Verlag. p. 137-150.)

MUKHERJEE, S., LIGHTFOOT, J. & SLOPER, P. 2001. Communication about pupils in mainstream school with special health needs: the NHS perspective. *Child care, health and development*, 28(1): 21-27.

MUTHUKRISHNA, N. & SCHOEMAN, M. 2000. From special needs to quality education for all: a participatory, problem-centred approach to policy development in South Africa. *Journal of inclusive education*, 4(4):315-335.

NAICKER, S. 2001. Inclusive education in South Africa. (In Engelbrecht, P., Green, L., Naicker, S. & Engelbrecht, L., *eds.* Inclusive education in action in South Africa. Pretoria: Van Schaik. p. 6-19.)

NIEMAN, M,M. & PIENAAR, G.E. 2006. The role of the learning process, learning styles and learner difference in the mediation of learning. (*In* Nieman, MM. & Monyai, RB. 2006. The educator as mediator of learning. Pretoria: Van Schaik. p. 72-103.)

NEUMAN, W.L. 1997. Social research methods. Qualitative and quantitative approaches. Boston: Allyn & Bacon.

NIEUWENHUIS, J. 2007a. Introducing qualitative research. (*In* Maree, K., *ed.* First Steps in Research. Pretoria: Van Schaik. p. 47-68.)

NIEUWENHUIS, J. 2007b. Qualitative research design and data gathering techniques. (*In* Maree, K., *ed.* First Steps in Research. Pretoria: Van Schaik. p. 70-93.)

NIEUWENHUIS, J. 2007c. Analyzing qualitative data. (*In* Maree, K., *ed.* First Steps in Research. Pretoria: Van Schaik. p. 106-108.)

OGNIBENE, L. 2007. The cure for the common school. Effective teaching methods for the 21st century. Boston: Universe Lincoln.

PHILPOTT, J. 2009. Captivating your class. Effective teaching skills. New York: Continuum International Publishing Group.

PIJL, S. J., MEIJER, C.J.W. & HEGARTY, S., *eds.* 1997. Inclusive education: a global agenda. London: Routledge

PINTRICH, P.R. & JOHNSON, G.R. 1996. Assessing and improving students' learning strategies, *New Directions for Teaching and Learning* 42:83-92.

PRASHING, B. 2006. Learning styles in action. Stafford: Network Continuum Education.

RAKHOLILE, M.E. 2006. The difficulties that educators experience related to teaching in inclusive classroom settings. Vanderbijlpark: North-West University. (Dissertation – M.Ed.)

RAULT-SMITH, J. 2009. How to assess. Expert educator series. Western Cape: Macmillan.

REESE, V.L. 2005. Learning style preferences of a diverse freshmen population in a large private, metropolitan university by gender, GPA, and institution. New York: St John's University. (Thesis – Ed.D.)

RICHARDSON, L. 2000. Writing: A method of inquiry. Handbook of qualitative research. 2nd edition. California: Sage Publications.

RIDING, R.J., & DAUGLAS, G. 1993. The effect of cognitive styles and mode of presentation on learning performance. *British journal of educational psychology,* 63:297-307.

ROSENBERG, M.J. 2001. E-Learning: strategies for delivering knowledge in the digital age. New York: McGraw-Hill.

SA ***see*** SOUTH AFRICA

SALEND, S.J. 1999. The impact of inclusion on students with and without disabilities and their educators. *Remedial and special education*, 20(2):114-127.

SALKIND, N.J. 2003. Exploring research. International edition. University of Kansas, Kansas: Merrill Prentice Hall.

SANDS, D.J., KOZLESKI, E.B. & FRENCH, N.K. 2000. Inclusive education for the 21st century. California: Wadsworth Thomson Learning.

SCALA, M.C. 2001. Working together. Reading and writing in inclusive classrooms. Port Washington, New York: USA International Reading Association.

SCHRAW, G. & OLAFSON, L.J. 2003. Educator's epistemological world views and educational practices. *Journal of cognitive education and psychology*, 3 (1):178-233, May.

SCHRAW, G., & OLAFSON, L.J. 2008. Assessing educators' epistemological and ontological world views (*In* Khine, M.S., *ed.* Knowing, knowledge and beliefs. Epistemological studies across diverse cultures. Australia: Springer Verlag. p. 25-41.)

SCHURR, S. 1994. Dynamite in the classroom: A how-to handbook for educators. Columbus, Ohio: National Middle School Association.

SCHRUGGS, T.E. & MASTROPIERI, M.A. 1998. The process of cooperative learning. (*In* Putnam, J.W., *ed.* Cooperative learning and strategies for

inclusion- celebrating diversity in the classroom. 2nd edition. Baltimore: Paul H. Brookes. p. 17-48.)

SING, C.C. & KHINE, M.S. 2008. Assessing the epistemological and pedagogical beliefs among pre-service educators in Singapore (*In* Khine, M.S., *ed.* Knowing, knowledge and beliefs. Epistemological studies across diverse cultures. Australia: Springer Verlag. p. 287-299.)

SKOGSBERG, K. & CLUMP, M. 2003. Do psychology and biology majors differ in their study process and learning styles? *College student journal,* 37(1):177-199

SLAVIN, R.E. 1997. Educational Psychology (Theory & Practice). 5th edition. New York: Allyn & Bacon.

SMART, R. 2000. Children living with HIV/AIDS in South Africa. A rapid appraisal. Pretoria: Save the Children.

SMITH, J. 2002. Learning styles: fashion fad or lever for change? The application of learning style theory to inclusive curriculum delivery. Innovations in education and teaching. Sheffield: Routledge.

SMITH, D.R. 2008. Learning style preference, sense of classroom community, gender, age, and previous experience with computer-mediated instruction (CMI). North-Carolina: University of North Carolina. (Thesis – PhD.)

SOUTH AFRICA. Department of Education. 1996a. South African Schools Act No. 27 of 1996. Pretoria: Government Printer.

SOUTH AFRICA. 1996b. Constitution of the Republic of South Africa, Act No.108 of 1996. Pretoria: Government Printer.

SOUTH AFRICA. Department of Basic Education. 2011. National Curriculum Statement. Curriculum and Assessment Policy Statement. Intermediate Phase Grade 4-6: Life skills. Pretoria: Government Printers.

SOUTH AFRICA. Department of Education. 1997. Quality education for all: Overcoming barriers to learning and development. Report of the National Commission on Special Needs in Education and Training and the National Committee on Education Support Services. Pretoria: Department of Education.

SOUTH AFRICA. Department of Education. 2001. Education White Paper 6 special needs education. Pretoria: Department of Education.

SOUTH AFRICA. Department of Education. 2002. Revised national Curriculum Statement Grades R-9 (School) Policy. Life Orientation. Pretoria: Government Printer.

SOUTH AFRICA. Department of Education. 2007. National Curriculum Statement, General Education and Training. Assessment Guidelines for Life Orientation (Intermediate and Senior Phases). Pretoria: Government Printers.

STIGGINS, R.J. 2002. Assessment crisis: The absence of assessment for learning. *Phi Delta Kappan*, 83:758-765, June.

SUTLIFF, R.I. & BALDWIN, V. 2001. Learning styles: teaching Technology subjects can be more effective. *The journal of technology studies*, 27(1):222-270

SWART, E., ENGELBRECHT, P., ELOFF, I. & PETTIPHER, R. 2002. Implementing inclusive education in South Africa: educators' attitudes and experience. *Acta academica,* 34(1):175-189.

SWART, E. & PETTIPHER, R. 2005. A framework for understanding inclusion. (*In* Landsberg, E., Kruger, D. & Nel, N., *eds.* Accommodating barriers to Learning. A South African perspective. Pretoria: Van Schaik. p. 3-20.)

SWART, R.E., PETTIPHER, O.R., ENGELBRECHT, P., ELOFF, I., OSWALD, M., ACKERMAN, C.J. & PROZESKY, A.M. 2000. Educator's attitudes towards and experiences in implementing inclusive education. Paper

presented at the Annual Conference of the Education Association of South Africa, Bloemfontein, 19-21 January.

SWINDELL, K.N. 2010. Differences in the middle school classroom: examining learning styles and learning environments of boys and girls from different socio-economic backgrounds. Dalla: University of Texas. (Dissertation – M.A.)

THOMAS, D.R.A. 2003a. General inductive approach for qualitative data analysis. University of Auckland, New Zealand: School of Population and Health.

THOMAS, R.M. 2003b. Blending qualitative and quantitative research methods in theses and dissertations. Thousand Oaks, CA: Sage Publications.

THOMAS, G. & LOXLEY, A. 2001. Deconstructing special education and constructing inclusion. Buckingham: Open University Press.

TLOKOTSI, M.M. 2008. A model to improve the implementation of portfolio assessment. Vanderbijlpark: North-West University. (Thesis - PhD.)

TSVIGU, C. 2008. Students' experiences, learning styles and understanding of certain calculus concepts: a case of distance learning at the Zimbabwe Open University. Cape Town: University of Cape Town. (Thesis – D.Ed.)

UDVARI-SOLNER, A. & KLUTH, P. 2008. Joyful learning. Active and collaborative learning in inclusive classrooms. Oak Park: Cowin Press.

ULUBABOVA, T.S. 2003. Comparative analysis of learning styles of Russian versus other adolescents form diverse nations by age, gender and academic achievement level. New York: St. John's University. (Thesis – Ed.D.)

UNESCO. 1994. The Salamanca Statement and framework for action on special needs education. Paris: UNESCO.

UYS, K. 2005. Severe and multiple disabilities. (*In* Landsberg, E., Kruger, D. & Nel, N., *eds.* Accommodating barriers to Learning. A South African perspective. Pretoria: Van Schaik. p. 211-236.)

VAN DER HORST, H. & MCDONALD, R. 1997. Outcomes based education. A teacher's manual. Pretoria: Kagiso Publishers.

VAN RENSBURG, G.H. 2002. Learning styles: implications for higher education. Pretoria: UNISA. (Thesis – PhD).

VAN ROOY, T. 2006. Group and individual learning facilitation. A training manual for education, training and development practitioners. Centurion, Pretoria: Mantlebe Books.

VAN ZYL, E. & PIETERSEN, C. 1999. An investigation into work stress experienced by a group of secondary school educators. *South African journal of education*, 19:74-78.

VAWDA, A. 2005. The learning styles of first year university students. Port Elizabeth: Nelson Mandela Metropolitan University. (Dissertation: M.A.)

VISSER, S., MCCHLERY, S., & VREKEN, N. 2006. Teaching styles versus learning styles in the accounting sciences in the United Kingdom and South Africa: a comparative analysis. *Meditari accounting*, 14(2):97-112.

VOSLOO, S.M. 2005. The functioning of primary school learners with paraplegia in mainstream schools. An exploratory study. Stellenbosch: University of Stellenbosch. (Thesis – PhD.)

WIERSMA, W. & JURS, S.G. 2009. Research methods in education. An introduction. California: Pearson Education.

ZINKIL, S. & GILBERT, T. 2000. Parent's view: What to consider when contemplating inclusion. *Intervention in school and clinic*, 35(4):224-228.

APPENDIX A

PERMISSION FROM GAUTENG DEPARTMENT OF EDUCATION

UMnyango WezeMfundo
Department of Education

Lefapha la Thuto
Departement van Onderwys

Enquiries: Nomvula Ubisi (011)3550488

Date:	23 October 2008
Name of Researcher:	Motloung Phindiwe Aletta
Address of Researcher:	06 Voortrekker Street
	Denneysville
	1932
Telephone Number:	0163711960/0847579331
Fax Number:	0169884028
Research Topic:	A teaching and learning programme to address learning style diversity in life orientation in inclusive classroom settings
Number and type of schools:	20 Primary Schools
District/s/HO	Sedibeng West

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

Permission has been granted to proceed with the above study subject to the conditions listed below being met, and may be withdrawn should any of these conditions be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*

Office of the Chief Director: Information and Knowledge Management
Room 501, 111 Commissioner Street, Johannesburg, 2000 P.O.Box 7710, Johannesburg, 2000
Tel: (011) 355-0809 Fax: (011) 355-0734

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher must supply the Director: Knowledge Management & Research with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

CHIEF DIRECTOR: INFORMATION & KNOWLEDGE MANAGEMENT

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	Mothoung P.A
Date:	26/9/2008

APPENDIX B

LETTERS OF CONSENT

INFORMED CONSENT (EDUCATOR)

Dear Educator

I am busy with a research study for my PhD-degree. I need your assistance to provide me with information to complete the study. This document will provide you with information regarding the project and what your involvement will entail. If you feel comfortable with the contents of the explanation, I will appreciate it if you could sign the section indicating your consent to take part in the study.

Kindly note the following before you give consent to participate in the project.

No Learning programme exists to assist educators to accommodate the diverse learning styles in inclusive classroom setting. It is the aim of this research to develop such a programme.

With the assistance of Life Orientation educators, I shall conduct interviews and do observations of classroom teaching and learning to collect data related to how Grade 4 Life Orientation educators accommodate diverse learning styles during teaching. Participation will not be compulsory and you may withdraw at any time should you feel uncomfortable. I would like to do one interview with you. The duration of the interview will be forty-five minutes, scheduled at a time convenient for you, and will be tape-recorded. Three observations of thirty minutes each will be conducted at times convenient for you. The first observation will be announced but the last two observations will be unannounced. During the interview and observation, I want to gauge your understanding of learning style needs, and explore the teaching methods and strategies, learning activities, and the assessments practices you use to accommodate diverse learning styles. No possible risks are envisaged.

There are no direct benefits for taking part in the study. The designed programme though will provide you with guidelines that may in future assist you to deal with planning your teaching in order to accommodate diverse learning styles

CONFIDENTIALITY: the information that you disclose during the interview will be kept confidential by the researcher. When reporting on the interview information no names will be revealed and each participant will be identified by a code. Results of the observations will also be reported anonymously.

The research is conducted by a Doctoral student, P.A. Motloung, under the supervision of Prof M.M. Grosser from the School of Educational Sciences, North-West University (Vaal Triangle Campus). If you have any questions or queries, you can contact Prof Grosser at 016 910 3063 (work).

CONSENT:

I……. (full name) have read and understand the nature of my participation in the project and agree to participate.

Signature:……
Date:……

INFORMED CONSENT (PRINCIPAL)

Dear Educator

I am busy with a research study for my PhD-degree. I need the assistance of Grade 4 Life Orientation educators in your school, in order to complete the study. This document will provide you with information regarding the project and what the educators' involvement will entail. If you feel comfortable with the contents of the explanation, I will appreciate it if you could sign the section indicating your consent that the educators may take part in the study.

Kindly note the following before you give consent to participate in the project.

No Learning programme exists to assist educators to accommodate the diverse learning styles in inclusive classroom setting. It is the aim of this research to develop such a programme.

With the assistance of Life Orientation educators, I shall conduct interviews and do observations of classroom teaching and learning to collect data regarding the ways in which educators accommodate diverse learning style needs. Participation will not be compulsory and educators may withdraw at any time should they feel uncomfortable. I would like to do one interview with each educator, which will be tape-recorded. The interview will be scheduled at a time that will be convenient for the educators and will take fourty-five minutes. Three observations of thirty minutes each will be conducted at times convenient to the educators. The first observation will be announced, but the last two will be unannounced. During the interview and observation I want to explore the teaching methods and strategies, learning activities, and the assessments practices the educators use to accommodate diverse learning styles. No possible risks are envisaged. I therefore request your permission to involve the Life Orientation staff members at your school in the research.

There are no direct benefits for taking part in the study. The designed programme though will provide you with guidelines that may in future assist the educators to deal with planning their teaching in order to accommodate diverse learning styles

CONFIDENTIALITY: the information that you disclose during the interview will be kept confidential by the researcher. When reporting on the interview information no names of the participants or their schools will be revealed and each participant will be identified by a code. Results of the observations will also be reported anonymously.

The research is conducted by a Doctoral student, P.A. Motloung, under the supervision of Prof. M.M. Grosser from the School of Educational Sciences, North-West University (Vaal Triangle Campus). If you have any questions or queries, you can contact Prof. Grosser at 016 910 3063 (work).

CONSENT:

I……. (full name) have read and understand the nature of my participation in the project and agree to participate.

Signature:…….
Date:…….

APPENDIX C

INTERVIEW PROTOCOL

A TEACHING AND LEARNING PROGRAMME TO ACCOMMODATE LEARNING STYLE DIVERSITY IN AN INCLUSIVE LIFE ORIENTATION CLASSROOM SETTING

Focus group interview questions

Knowledge questions

- What is your understanding of diverse learning styles in your inclusive Life Orientation classroom?

Experience and behaviour questions

- Which learning styles do you accommodate during teaching and learning in your inclusive Life Orientation classroom?
- How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?
- Which teaching methods and strategies do you use to teach diverse learning styles in your inclusive Life Orientation classroom?
- Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?
- Which assessment methods and strategies do you use to accommodate diverse learning styles in your inclusive Life Orientation classroom?

Opinion and value questions

- What is the effect of using one teaching method on a continuous basis?
- What is the effect of using one type of learning activity on a continuous basis?
- What is the effect of using one type of assessment method constantly?
- What is your opinion about using different teaching methods and strategies in your inclusive Life Orientation classroom?
- What is your opinion about giving different learning activities in your inclusive Life Orientation classroom?
- What is your opinion regarding the use of different assessment methods and strategies in your inclusive Life Orientation classroom?

Feeling questions

- How do you feel about accommodating diverse learning styles in your Life Orientation classroom?

Background/ Demographic questions

Please complete by ticking the appropriate box the following information about yourself:

1. **Gender**

Male	Female

2. **Age:**

25 - 35	36 - 45	46 - 55	56 - above

3. **Teaching experience in education: (number of years in teaching)**

1- 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - above

4. **Teaching experience: (number of years in the Phase)**

1- 3	4 - 6	7 -10	11 - 15	16 - 20	21 - above

5. **Teaching experience: (number of years in the grade)**

1- 3	4 - 6	7 -10	11 - 15	16 - 20	21 - above

6. **Teaching experience: (number of years in teaching Life Orientation)**

1- 2	3 - 4	5- 6	6 - 7	8 - 9

7. **Position of the participants**

Principal	Deputy-principal	HOD	Educator

THANK YOU

APPENDIX D

EXAMPLE OF OBSERVATION SCHEDULE AND RUNNING RECORD

EXAMPLE: OBSERVATION SCHEDULE : Observation 1: Group 2, participant 2

1. LEARNING STYLES

CRITERIA	YES	NO	RUNNING RECORD
1. Is the educator aware of the diverse learning styles in the classroom?		**X**	Educator does not appear to be aware of different learning style needs. Only Interactive teaching is taking place. Learners have to take part in group discussions the entire period. This is limiting the opportunities for learners who do not prefer interpersonal learning.

2. TEACHING METHODS AND STRATEGIES

1. Which of the following methods/strategies are used during teaching?	YES	NO	RUNNING RECORD
1. Questioning	X		Educator makes use of questioning to direct the group work. The use of questioning is good to accommodate learners who like to think and reflect during teaching and learning.
2. Lectures		X	
3. Work sheets		X	
4. Role-plays		X	
5. Field trips		X	
6. Presentations by educators	X		
7. Demonstrations by educators		X	
8. Cooperative learning/Group work	X		Group work is done for the entire period. Overemphasis on the use of collaborative/group learning for the entire

1. Which of the following methods/strategies are used during teaching?	YES	NO	RUNNING RECORD
			period. No opportunities for individual meaning making or reflection. The topic dealt with, namely different religions were used for the structuring of a variety of activities: interviews could have been used so that learners could interview a peer to find out more about their religion, readings about different religions could have been provided to accommodate learners who enjoy learning by making use of their senses.
9. Case studies		X	
10. Debates		X	
11. Making posters		X	
12. Experimenting		X	
13. Cross word puzzles		X	

1. Which of the following methods/strategies are used during teaching?	**YES**	**NO**	**RUNNING RECORD**
14. Projects		X	
15. Constructing concept maps		X	
16. Designing		X	
17. Demonstration by learners		X	
18. Surveys		X	
19. Oral presentations by learners	X		Different groups got the opportunity to communicate their opinions to the rest of the class.
20. Drilling		X	
21. Brainstorming		X	
22. Other			

3. LEARNING ACTIVITIES

1**. Which learning activities are used by the educator?**	**YES**	**NO**	**RUNNING RECORD**
1. Design and making		X	
2.Written tasks/activities/test		X	
3.Discussions	X		Only discussions were used during the entire period. One strategy limits the opportunities of learners who have other learning preferences to take part fully in the teaching and learning process.
4.Other			

4. ASSESSMENT

4.1 ASSESSMENT METHODS

1. Does the educator use the following assessment methods in the classroom?	**YES**	**NO**	**RUNNING RECORD**
1.Educator assessment		X	No assessment of the work that was

2. Group assessment		X	done during the period took place. The educator could have made use of group assessment to assess the presentations of the various groups. Each learner could also have been given the opportunity to submit his/her responses in writing that could be assessed by the educator. No home work was given to give learners the opportunity for independent practice.
3. Peer assessment		X	
4. Self-assessment		X	

4.2 ASSESSMENT STRATEGIES

1**. Does the educator use the following assessment strategies in the classroom?**	**YES**	**NO**	**RUNNING RECORD**
1.Examinations		X	
2.Tests		X	
3.Projects		X	
4. Assignments		X	
5.Surveys		X	

6.Debates		X	
7.Interviews		X	
8.Panel discussions		X	
9.Demonstrations		X	
10.Homework		X	
11. Other			

APPENDIX E

CODING OF INTERVIEW DATA

ROW	Focus group 1	Question 1a: What is your understanding of diverse learning style needs?	Open codes	Axial codes
C1	Participant 1:	"It means that, in other words there are those learners, or is the inclusion of those different learners abilities, so you have to approach them in a way, there are those who will grasp the information faster than the others, so that is why I what I understand that they do different, according to their learning style and moods, so the approach again is different and the way you treat them is according to their learning ability".	different learners' abilities faster grasping of information learning styles moods learning ability	Understanding of learning style needs In terms of • Ability • Mood • Tempo in grasping information
C2	Participant 2:	"Mnr is hundred percent correct, I fully agree with him to say learning style are different learners and the way they learn".	different learners Way of learning	Understanding of learning style needs as a way of learning
C3	Participant 3:	" Yes Mam, that is my common understanding of what Mnr has said and to take it further with these types of learners you need to have variety of resources, because the approaches wont' be the resources, because the approaches wont' be the same, and the pace in which the learners are taught or receive information will not be the same and the development differs".	Need variety of resources Learning pace	Understanding learning style needs related to pacing learning Utilizing a variety of resources
C4	Participant 4:	Mam, I do not know if I am correct, I am thinking of slow learners and fast learners.	Slow Fast learners	Understanding of learning style needs in terms of tempo in processing

				information
C5	Participant 5:	"I think I agree with them mam".		Slow and fast learners
C6	Participant 6:	Reported that he attended a workshop		
C7	Participant 7:	Did not honour interview appointment		
C8	Participant 8:	Did not honour interview appointment		
	Focus group 1	**Question 1b: Which type of learning styles do you accommodate during teaching and learning in the inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C9	Participant 1:	"There are a variety of learning styles and teaching styles, because according to NCS document in the type of assessment, say for an example in this term you are assessing learners on tests only, the next term you will do a research or whatever and the other term investigation, so then now it say what type of learning styles, it will depend on the task that you will be tackling".	Variety Assessing learners with tests and research Depend on the task	Learning styles linked to the use of different assessment strategies Learning styles linked to the nature of a task
C10	Participant 2:	" The one I like so much is that of communication, because there are those learners who are reserved, which term is?, oh! Introverts and extroverts, there are those learners who like talking, but sometimes when you say, ok lets go to the book, that child cannot write, what he/she has said, but when coming to discussing and orals, that child can talk and talk, the other one, introvert will always be there, when	Introverts and extroverts, Cannot write Discussing	Types of learning styles linked to personality (introverts/extroverts) and learning preferences such as speaking, writing, listening, reproducing

		you say Puleng, Puleng just come in, but when coming to writing as we have said is a good listener, just take information and reproduce it, so you have to apply different styles to accommodate introverts and extroverts".	Orals	information.
C11	Participant 3:	"They are different, some like to touch, and are the Sensors some in oral they are good but when coming to writing they do not want to write, others do not talk, they are always quiet.	touching, Sensors oral writing quiet	Types of learning styles linked to using different senses Distinguish between learners who like to talk and those who are quiet
C12	Participant 4:	"Ja, Mam, but some like to do practical of what you say and are Doers and others like an activity whereby they are not writing but in playing they are good".	Practical, Doers Playing No writing	Learning styles linked to different ways of learning by writing, playing or doing something practical
C13	Participant 5:	"There are those learners who only like to demonstrate, things even if they do not talk too much in my class and are Doers".	Demonstrate, Doers Learners who do not talk much	Learning styles linked to ways of learning: demonstrating, doing and talking
C14	Participant 6:	Reported that he attended a workshop		
C15	Participant 7:	Did not honour interview appointment		
C16	Participant 8:	Did not honour interview appointment		

	Focus group 1	Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C17	Participant 1:	"So I think there are those that who are fast, Thinkers learners that I most give enrichment, more work to do, more challenging work then you work on those that are slow Doers, I just sit around the table just talk to them, and give fast learners challenging work for them not to make a lot of noise and work with the slow learners".	more challenging work for fast, Thinkers Assist the slow learners	Separating learners into groups - fast and slow learners Paying attention to both slow and fast learners
C18	Participant 2:	"Ja, its like that fast learners get extra work and slow learners you give individual attention so that they can also be accommodated".	extra work individual attention fast, slow learners	Separating learners into two groups: fast and slow learners Preparing for both fast and slow learners
C19	Participant 3:	"With me Mam, slow learners get remedial work".	Remedial work for slow learners	Focus on slow learners by giving remedial work
C20	Participant 4:	"In my class, I mix slow, Doers learner and the fast Thinkers learners, Watchers".	Mixing slow learners and fast learners	Distinguish between fast and slow learners
C21	Participant 5:	"Hay, Mam please pass".	No response	
C22	Participant 6:	Reported that he attended a workshop		
C23	Participant 7:	Did not honour interview appointment		
C24	Participant 8:	Did not honour interview appointment		

	Focus group 1	Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C25	Participant 1:	"Telling, discussions, scenarios-indirect".	Indirect Discussions Scenarios	Mainly uses Indirect Teaching Method – verbal teaching
C26	Participant 2:	"I use the peer teaching-interactive method where each learner teaches each other".	Interactive peer teaching	Mainly uses interactive and collaborative teaching
C27	Participant 3:	"I use group discussions and demonstrations-indirect".	Discussions, demonstration indirect	Mainly uses discussions and demonstrations-verbal and visual learning
C28	Participant 4:	"Many methods Mam, like telling, stories and group discussions-indirect".	Storytelling, group discussion indirect	Mainly uses verbal teaching methods
C29	Participant 5:	"In my class learners work best in groups and in pairs-interactive".	Group and pair work Interactive	Mainly uses interactive teaching and social learning
C30	Participant 6:	Reported that he attended a workshop		
C31	Participant 7:	Did not honour interview appointment		
C32	Participant 8:	Did not honour interview appointment		

	Focus group 1	Question 1e: Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C33	Participant 1:	"Group activities, home works and class works".	Group activities Home and class work activities	Variety of activities- individual and group work
C34	Participant 2:	"Also posters to design".	Designing posters	Practical design activities
C35	Participant 3:	"I give activities that are relevant to each learner, for fast learners I give challenging activities and slow learners I give simple activities".	Challenging and easy work Fast, slow learners	Variety of activities to accommodate fast and slow learners Difficulty level of activities vary
C36	Participant 4:	"I agree with them Mam activities must be difficult and easy".	Difficult and easy activities	Activities at different levels of difficulty
C37	Participant 5:	"I give class activities so that they do them in the classroom. At home they do projects and assignments".	Class activities Projects and assignments	Class activities and activities to do at home Independent work given in the form of projects and assignments.
C38	Participant 6:	Reported that he attended a workshop		
C39	Participant 7:	Did not honour interview appointment		
	Participant 8;	Did not honour interview appointment		

	Focus group 1	Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C40	Participant 1:	"We use the tests, examinations and I mark and give marks then I convert them into levels".	Tests and examination (educator)	Mainly uses assessment of learning Educator directed assessment
C41	Participant 2:	"With me Mam, I make them to assess each other and in groups".	Peer and group assessment	Mainly uses assessment of learning: peer and group assessment
C42	Participant 3:	"Also Mam, we use rubrics to assess".	Rubrics	Did no understand the question- rubrics are assessment tools
C43	Participant 4:	"After we have marked with them I give them answers to make corrections".	Marking Give answers Learners do corrections	Appears to use mainly assessment of learning which requires correct answers
C44	Participant 5:	"With me I give tests and examinations, projects and they go and do interviews with nurses at clinics to get information on diseases and they also make posters".	Tests, exams, projects, interviews, posters	Uses a variety of assessment strategies - assessment of and assessment for learning
C45	Participant 6:	Reported that he attended a workshop		
C46	Participant 7:	Did not honour interview appointment		

C47	Participant 8:	Did not honour interview appointment		
	Focus group 1	**Question 2a: What is the effect of using one method of teaching on a continuous basis?**	**Open codes**	**Axial codes**
C48	Participant 1:	"If you use one method all those learners will not be catered for, because you have to use different techniques to accommodate all these learners".	Not all learners are catered for	Use different methods to cater for all learners
C49	Participant 2:	"Yes, because they are different, others are slow others are fast one method will not work".	One method will not work for all	Learners are different and therefore different methods are needed
C50	Participant 3:	"But you know what Man, they become used to that method. They know that Mr so and so when he comes he is going to use this method, he going to start to start by saying that and that, so they know that you are going to start by asking questions, or just come, in introduce the lesson, but as time goes on you know that you must go back the slow learners and just do remedial work and go on".	They become used to the method	Learners become familiar with one method
C51		"To respond to what Mr has said we as educators, we need to be curriculum developers, therefore if we develop the curriculum properly learners are not going to be bored. In the first place you as an educator you will not be bored because there are times when you as an educator you find that you not giving accurate assessment to learners because you are not using the variety of assessment and some people think that teaching is a lot of work, I remember when I started teaching I was thinking that to accommodate every learners,	Learners are not going to be bored Educators will not be bored Accurate assessment	Avoiding boredom and adhering to proper curriculum development and assessment Educators to be empowered to accommodate learning styles

		those learners who are slow they need to be taken by somebody who is specializing in that area, but what I have noted is not true, each educator must be empowered as being curriculum designers you need to include all these teaching styles and assessment because if you do not do that you are going to become redundant and the learners too as well, you are not going to move".	Educators to be empowered Educator and learner redundant Not going to move	Progress will be hampered if learning styles are not adhered to
C52	Participant 5:	"Right, currently Mam, I have attended a workshop where were encouraged to use communal marking, so I have started implementing that so that now, each learner is quite aware that Thandie got 6 and that one is cheating, I have seen that there is that challenge within the learners to say that man gave that one so much and so on. To take it further each educator is going to be bored if using same method, I mean you cannot eat the same porridge everyday".	Educator is going to be bored	Boredom among educators
C53	Participant 6:	Reported that he attended a workshop		
C54	Participant 7:	Did not honour interview appointment		
	Participant 8:	Did not honour interview appointment		
C55	**Focus group 1**	**Question 2b: What is the effect of using one type of learning activity on a constant basis?**	**Open codes**	**Axial codes**
C56	Participant 1:	"When all learners do the same activity, they will copy each other".	Copying from each other	Using one type of activity will lead to learners copying from one another
C57	Participant 2:	"In the form of a group the underachievers will always be protected,	Underachievers	Underachievers are

		but in the form of the individuals is then that you are going to be able to see that this learner is struggling, he can hardly write what he is thinking to write, that is the problem when he is alone and is the underachiever, but when in a group is safe because he will be assisted by others, then they see there is one of learners who got 60".	protected in a group Assisted by others	protected by group work
C58	Participant 3:	"But when, Mam you assess them individually you be surprised that the underachievers will be exposed".	Individual assessment expose underachievers	Disadvantage of using individual assessment as the only method of assessment is that certain learners will be exposed
C59	Participant 4:	"Yes Mam, those weaker learners are going to be exposed".	Weaker learners exposed	Weaker learners will be exposed when using one type of activity
C60	Participant 5:	"I think when learners do the same activity they will not achieve the same, clever ones will score high and the slow learners will score very low".	Not achieve the same. Clever ones will score high, slow learners will score very low	Importance of using different activities so that all learners can achieve
C61	Participant 6:	Reported that he attended a workshop		
C62	Participant 7:	Did not honour interview appointment		
C63	Participant 8:	Did not honour interview appointment		

	Focus group 1	Question 2c: What is the effect of using one type of assessment method constantly?	Open codes	Axial codes
C64	Participant 1:	"Some I think they pass very well while others struggle".	Some pass very well, others struggle	Different levels of achievements
C65	Participant 2:	"I think they will all achieve if other questions are easy and others are difficult".	Achieve if other questions are easy and others are difficult	Vary difficulty level to make it possible for all to achieve
C66	Participant 3:	"You know what in my case you find that in a group they copy from each other and write the same thing even if it right or wrong".	Copying from each other	Reliance on the work of others
C67	Participant 4:	"Others do well but others do very bad".	Well. Bad	Quality of performance differs
C68	Participant 5:	"Yes I agree with them Mam, because these learners are not studying, they do not work hard and serious to pass".	Not studying Do not work hard Not serious to pass	Underperformance if the same assessment method is used
C69	Participant 6:	Reported that he attended a workshop		
C70	Participant 7:	Did not honour interview appointment		
C71	Participant 8:	Did not honour interview appointment		

	Focus group 1	Question 3a: What is your opinion about using different teaching methods and strategies in your inclusive Life Orientation classroom?	Open codes	Axial codes
C72	Participant 1:	"I think no one will be left behind because those fast learners will do theirs and the slow learners also their method.	No one left behind	All learners will be catered for
C73	Participant 2:	"I think it will help learners to achieve at their own levels"'	Learners to achieve at their own levels	Individualised achievement will be made possible
C74	Participant 3:	"I think learners should know that they can achieve in a different ways to get the correct answer, they can learn in different ways and there is more than one ways to achieve".	Achieve in different ways Learn in different ways	Different levels of achievements Different ways of learning
C75	Participant 4:	"I think learners will be confused, but one method will make them to focus on what you are teaching. Many methods in the class will make others to look at what others do and not focus on their work".	Confused Focus Not focus on their work	Many methods cause confusion and loss of focus
C76	Participant 5:	"No, Mnr it does not mean you use all methods in the same time. I think it will be good since these learners are different and learn differently".	Good Learners are different and learn differently learning	Accommodate learners who learn in different ways
C77	Participant 6:	Reported that he attended a workshop		
C78	Participant 7:	Did not honour interview appointment		

C79	Participant 8:	Did not honour interview appointment		
	Focus group 1	**Question 3b: What is your opinion about giving different activities in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C80	Participant 1:	"It will help a lot, because these learners will do the activities according to their abilities".	Help a lot Activities according to their abilities	Recognition of different ability levels
C81	Participant 2:	"The problem I see is that now we must plan many activities and mark many different activities. People this is a lot of work we do not have time".	Plan many activities and mark many different activities	Increased workload
C82	Participant 3:	"It is ok because we still give expanded opportunities to these learners".	Ok Expanded opportunities	Gives learners more than one chance to be successful
C83	Participant 4:	"I agree to say it really a lot of work. We do not have time, the Department is demanding a lot from educators. That is why we do not cover all the work this is too much".	Lot of work We do not have time	Increase in workload Not possible due to time constraints
C84	Participant 5:	"It will be a good idea if they can show us how to do that, maybe we will do things properly if now they want us to change, they must show us how".	Good idea Show us Do things properly Must show us how	Supportive of giving different activities In need of support to be able to give different activities
C85	Participant 6:	Reported that he attended a workshop		

C86	Participant 7:	Did not honour interview appointment		
C87	Participant 8:	Did not honour interview appointment		
	Focus group 1	**Question 3c: What is your opinion regarding the use of different assessment methods and strategies in the Life Orientation classroom?**	**Open codes**	**Axial codes**
C88	Participant 1:	"You will be assessing them according to their performance".	Assessing according to performance	Different assessment methods must focus on assessing performance
C89	Participant 2:	"My opinion is that when assessing differently they will achieve differently".	Will achieve differently	Different levels of achievement
C90	Participant 3:	"You will be assessing them according to their abilities there is no way that the slow learner can score the same as the fast learner".	According to abilities	Necessary to assess according to the ability of a learner
C91	Participant 4:	"My opinion again is this is a lot of work, there is no time to do many assessments".	Lot of work No time to do many assignments	Not possible due to work overload and lack of time
C92	Participant 5:	"But it is difficult as long as we can get assistance maybe we will manage".	Difficult Get assistance	Using different assessment methods is difficult In need of assistance to cope with the use of different assessment

				methods
C93	Participant 6:	Reported that he attended a workshop		
C94	Participant 7:	Did not honour interview appointment		
C95	Participant 8:	Did not honour interview appointment		
	Focus group 1	**Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?**	**Axial codes**	
C96	Participant 1:	"I think it is a good approach, because it is a hands-on approach, and as an educator you need to be observant and proactive because you need to plan ahead, so you cannot come to class unprepared, how are you going to accommodate all those learners within different groups. So it is a good approach you need to prepare ahead and everyone will benefit in the inclusive setting".	Good approach Be observant and proactive Cannot come to class unprepared	Will support better preparation by educators that will benefit the learners
C97	Participant 2:	"One other thing Man, you know, it is tough, because you are having these learners who can hardly read, hardly read, so it is time consuming to these children who are fast learners, that is why you will find that children become out of order, just take time and say you are only going to concentrate on these slow learners, others become bored".	Tough Time consuming Concentrate on slow learners others become bored	Time consuming and difficult to handle slow and fast learners in one class
C98	Participant 3:	"Yes I agree it is very tough but that is what the Department of Education said there must be inclusion, but Mam it is tough".	Tough	Tough policy
C99	Participant 4:	"Again that is why you find these children go to Secondary schools, those who were struggling can hardly complete grade 8. After grade	You can only accommodate them at	Only possible at Primary School level

		8 they do not go to school or they go somewhere because they feel that they are stupid, you can only accommodate them at Primary but at Secondary no one cares about them".	Primary	
C100	Participant 5:	"It is difficult Mam, in grade 7 there are those who cannot read and write". It is very difficult Mam unless we have that remedial educator who can take them all and teach them in one class. I do not think we can be able to manage".	Difficulty read Write	Literacy problem
C101	Participant 6:	Reported that he attended a workshop		
C102	Participant 7:	Did not honour interview appointment		
C103	Participant 8:	Did not honour interview appointment		

ROW	**Focus group 2**	**Question 1a: What is your understanding of diverse learning style needs?**	**Open codes**	**Axial codes**
C104	Participant 1:	"I think, it means that all the learners are not the same."	All the learners are not the same	Diversity among learners
C105	Participant 2:	"I can say that the learning style is different learners learning together".	Different learners learning together	Diverse learners learning together
C106	Participant 3:	"I understand that in the class learners are not equal and the same mentally"	Not mentally the same Are not equal	Different levels of mental ability
C107	Participant 4:	"My understanding is that learners learn differently from other".	Different learning	Learners learning differently
C108	Participant 5:	"Ja ,Mam, I also agree with them."		

C109	Participant 6:	Did not honour the appointment.		
C110	Participant 7:	Did not honour the appointment.		
C111	Participant 8:	Did not honour the appointment		
	Focus group 2	**Question 1b: Which learning styles do you accommodate during teaching and learning in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C112	Participant 1:	"I think we accommodate all the different types, like achievers which are Thinkers and the underachievers "	Achievers, who are Thinkers Underachievers	Accommodation of learning styles linked to achievement
C113	Participant 2:	"Yes we accommodate them all we cannot be selective, every one of them is important, faster, Thinkers and slow learners they are all important.	Fast, Thinkers and slow learners	Accommodation of learning styles linked to being a fast or slow learner
C114	Participant 3:	"I accommodate all types Mam as mentioned above"		Achievers, underachievers, fast and slow learners
C115	Participant 4:	"In my class I have good performers and poor performers, maybe they can be thinker and Doers but I accommodate them all."	Good performers, Thinkers and Doers Poor performers	Learning styles linked to performance
C116	Participant 5:	"In my class I have talkative and consecutive learners that may be Watchers and may be Doers	Talkative, consecutive, Watchers,Doers	Two groups of learners distinguished: talkative and consecutive
C117	Participant 6:	Did not honour the appointment.		

C118	Participant 7:	Did not honour the appointment.		
C119	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Axial codes**	
C120	Participant 1:	"I think everyone can take part like for instance when coming to religion, each and every learner can talk about his/her religion in a classroom each one of them get a chance, like cultures, initiations school, each one get to talk about, what is the importance's when returning from the mountains can tell others that did not, they can discuss."	Everyone can take part Each one of them get a chance	Teaching should provide every learner with a chance/opportunity for input
C121	Participant 2:	"I talk one on one with them, to ensure that they understand."	Talk one on one with them	Face to face contact
C122	Participant 3:	"I give the activity and divide them into groups, they can discuss	Activity Groups Discuss	Group activities accommodate diverse learning styles
C123	Participant 4:	"I group them in small groups to work together as a group".	Small groups	Working in small groups accommodate diverse learning styles
C124	Participant 5:	"Learners also work well in pairs when you group them".	Pairs	Working in pairs accommodate diverse learning styles

C125	Participant 6:	Did not honour the appointment.		
C126	Participant 7:	Did not honour the appointment.		
C127	Participant 8:	Did not honour the appointment		
	Focus group 2	**Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles?**	**Open codes**	**Axial codes**
C128	Participant 1:	"Teaching methods, telling, discussion, group work-indirect"	Telling Group work Discussion	Variety of Direct and Interactive strategies
C129	Participant 2:	"In my class I use many different methods like discussions, group work, and peer-interactive"	Discussion, Peer Group work	Variety of Direct, Indirect and Interactive strategies
C130	Participant 3:	"I use any method that is suitable for the activity, eg lecture, demonstration"	Method that is suitable for the activity Lecture Demonstration	Methods should fit the activity Direct – lecture and demonstration
C131	Participant 4:	"Teaching methods for different learners I use discussions, role-plays, research-indirect"	Discussions Role-plays Research	Variety of Indirect and Independent methods used
C132	Participant 5:	"A variety of methods like group teaching, class teaching, practical teaching-direct"	Group teaching Class teaching Practical teaching	Variety of Direct and Indirect Teaching Methods

C133	Participant 6:	Did not honour the appointment.		
C134	Participant 7:	Did not honour the appointment.		
C135	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 1e: Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C136	Participant 1:	"Questions and answers, I ask them orally or give them as written work"	Question and answer Orally Written work	Variety of oral and written activities
C137	Participant 2:	"Debates, assignments, research"	Debates Assignments Research	Independent and interactive activities
C138	Participant 3:	"I send them out to clinics to go and get information on the HIV/AIDS, or TB and they interview the nurses"	Interviews	Practical activities
C139	Participant 4:	"Activities of role-play and they also demonstrate in the class"	Role-plays demonstrations	Practical and interactive activities
C140	Participant 5:	"The discussions is used every time, remembers in LO the groups get topics and discuss them"	Discussions	Interactive activities
C141	Participant 6:	Did not honour the appointment.		
C142	Participant 7:	Did not honour the appointment.		
C143	Participant 8:	Did not honour the appointment.		

	Focus group 2	Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C144	Participant 1:	"It is the peer and educator method that is used by the educator. Learners are using self-assessment method."	Peer Educator Self	Variety of peer, educator and self-assessment Assessement of and for learning
C145	Participant 2:	"Assessment methods that we use must suit the activities we give to learners, like when you give test there must be a memorandum that the educator will use when marking the test".	Must suit the activities Test and memorandums	Educator test and memorandums Educator assessment Assessment of learning
C146	Participant 3:	"Group assessment."	Group Peer	Two methods used, namely group and peer assessment Assessment for learning
C147	Participant 4:	"Peer Assessment"	Peer	Only one method used, namely peer assessment Assessment for learning

C148	Participant 5:	"With me Mam I make them to assess each other and in groups".	Peer Group	Two methods used, namely group and peer assessment Assessment for learning
C149	Participant 6:	Did not honour the appointment.		
C150	Participant 7:	Did not honour the appointment.		
C151	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 2a: What is the effect of using one method of teaching on a continuous basis?**	**Open codes**	**Axial codes**
C152	Participant 1:	"Ja, What I have observed is that, you know, learners learn in different ways, they do not understand the same method, if a certain method is suitable for a certain type of learners, and the others will become irritated because you use the same method".	Learners learn in different ways They do not understand the same method Learners become irritated	Using one teaching method will lead to learners not understanding and becoming irritated
C153	Participant 2:	"It is true we need to use different methods because learners like the methods where everyone can take part and can be part and parcel of the group, but when you use the same method like others have said other learners become bored".	Everyone can take part Learners become bored	Using the same method will not involve all learners and lead to boredom
C154	Participant 3:	"Yes ,Mam they like to play, everyone can, or want to participate that part they like it the most, they like to play.	Like to play and want to participate	Using one method will not have everybody

				participating
C155	Participant 4:	"One method is boring we must use different methods to accommodate all learners".	Boring	Using one method will lead to boredom among learners
C156	Participant 5:	"Me as an educator I can also be bored by using one method every time. Learners enjoy different things we must remember".	Educator also bored Learners enjoy different things	To enhance enjoyment different methods should be used Using one method can also lead to boredom among the educators
C157	Participant 6:	Did not honour the appointment.		
C158	Participant 7:	Did not honour the appointment.		
C159	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 2b: What is the effect of using one type of learning activity on a constant basis?**	**Open codes**	**Axial codes**
C160	Participant 1:	"Same activity, you find that some will participate freely, maybe they will not enjoy that activity or the style used in the activity, then there will be that fear that others will laugh at them, you will find that they will be left behind, that is why you must use different methods".	Some will participate freely Fear that others will laugh Will be left behind	Classroom climates where all learners do not feel free will be created Discourage fear of embarrassment
C161	Participant 2:	"The clever ones will get high marks, and the slow learners will score low marks."	High marks Low marks	A scenario will be created where only

				some learners will perform well
C162	Participant 3:	"The class will become disruptive because not all learners are interested."	Disruptive class-class Disruptive Not all learners are interested	Class disruptions will occur due to lack of interest
C163	Participant 4:	"You do not cater for all the children."	Not cater for all children	Selective catering for the needs of specific learners only
C164	Participant 5:	"You have to change the methods because the learners who are idling will disrupt the class."	Idling learners will disrupt the class	Learners who are not occupied or kept busy will cause disruptions.
C165	Participant 6:	Did not honour the appointment.		
C166	Participant 7:	Did not honour the appointment.		
C167	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 2c: What is the effect of using one type of assessment method constantly?**	**Open codes**	**Axial codes**
C168	Participant 1:	"Most of them give the same answers".	Same answers	Diverse thinking will be hampered
C169	Participant 2:	"What I have observed is that you will find that in the rubric also is not fair, you will find that for the discussion the rubric ask, and did you understand the topic well? They will write well".	Not fair	Not being fair to all learners
C170	Participant 3:	"One other thing is that when using the different methods of	Different opinions	Diverse opinions and

		assessment they will come up with different opinions and you as the educator will judge what is right".		thinking will be enhanced
C171	Participant 4:	"It is difficult to assess them with the same method".	Difficult	One method of assessment makes assessment difficult
C172	Participant 5:	"They give different answers because they are different".	Different answers	Diverse learners will be given the opportunity to give diverse answers
C173	Participant 6:	Did not honour the appointment.		
C174	Participant 7:	Did not honour the appointment.		
C175	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 3a: What is your opinion about using different teaching methods and strategies in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C176	Participant 1:	"I think it will cater for every learner in the class".	Cater for every learner	All learners will be included during teaching and learning
C177	Participant 2:	"I agree with Mr X because when you teach you find that other learners become active, while others become shy then as the educator you can change the style of teaching to accommodate those learners to the method that will be easy for them".	Active Shy	Active participation is encouraged by all if teaching methods are varied
C178	Participant 3:	"Yes too much and demanding hence we end up doing method one	Demanding	Too demanding,

		activity, put them in one pot and cook, if you cannot cook then I over cook you."		therefore choose one method and treat everybody the same
C179	Participant 4:	"It is a hell of work, we cannot manage that as mam has mentioned."	Hell of work cannot manage	Using a variety of methods and strategies is demanding and unmanageable
C180	Participant 5:	"In marking it is too much, we cannot manage it"	Too much marking Cannot manage	Using a variety of methods and strategies will increase mark load and become unmanageable
C181	Participant 6:	Did not honour the appointment.		
C182	Participant 7:	Did not honour the appointment.		
C183	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 3b: What is your opinion about giving different learning activities in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C184	Participant 1:	"Um…, my opinion about different activities is that it is good, but yo! I am afraid if this is going to be a lot of work to us as educators".	It is good but is going to be a lot of work to educators	Positive but will imply an increase in workload for educators
C185	Participant 2:	""I also agree because learners will do and master all activities they	Do and master all	Learners will benefit by

		understand and enjoy".	activities Understand and enjoy	mastering activities an understanding and enjoying what they have to do
C186	Participant 3:	"It will help a lot, because these learners will do the activities according to their abilities".	It will help a lot Learners will do activities according to their abilities	Having different activities will help learners to complete activities in line with their abilities
C187	Participant 4:	"You know Mam it sound good but when coming to planning and marking all those different activities it's a lot of work for educators. We do not have enough time to all these things and every afternoon is a workshop".	Good but lot of work Do not enough time	Good but challenging in terms of planning the activities and marking them.
C188	Participant 5:	"It will be a good idea if they can show us how to do that, maybe we will do things properly if now they want us to change, they must show us how".	Good idea Show us how	Supportive of having different activities but need guidance to know how to do it
C189	Participant 6:	Did not honour the appointment.		
C190	Participant 7:	Did not honour the appointment.		
C191	Participant 8:	Did not honour the appointment.		

	Focus group 2	Question 3c: What is your opinion regarding the use of different assessment methods and strategies in your Life Orientation classroom?	Open codes	Axial codes
C192	Participant 1:	"I think it will be good to avoid boredom, children prefer to do things differently".	Good to avoid boredom Children prefer to do thing differently	The use of different assessment methods and strategies is necessary to avoid boredom and to accommodate learners who like to do things in their own way
C193	Participant 2:	""Yes it is true learners enjoy different ways of doing things".	Learners enjoy different ways of doing things	The use of different assessment methods and strategies acknowledge the uniqueness of each learner
C194	Participant 3:	"Yes, variety is the spice of life, you cannot do a thing the same way every time, you need to change"	Variety is the spice of life	Variety in using different assessment methods is necessary to bring "flavour" to assessment – making assessment interesting

C195	Participant 4:	"Ja, you will find that the way you assess them become difficult for them, then they will lose interest, then you have to use other methods that will suite them, that will make them to participate in the class, you will find that the method you are using for assessment each and every time they find that they are the dullest in the class then they lose interest in the Learning Area".	Become difficult Lose interest More methods will make them to participate Loose interest	Variety is necessary to avoid learners losing interest and not to participate
C196	Participant 5:	My opinion Mam is that It's a lot of work though but it's a good thing, maar a lot of work".	Lot of work , good thing	Variety will increase educator work load
C197	Participant 6:	Did not honour the appointment.		
C198	Participant 7:	Did not honour the appointment.		
C199	Participant 8:	Did not honour the appointment.		
	Focus group 2	**Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C200	Participant 1:	"I feel fine, because my learners will enjoy the Learning Area and participate by using different styles of teaching and when they are performing well I will feel happy, because I would have accommodated all in Life Orientation".	Fine Learners will enjoy and participate Feel happy	Acceptable as it will be beneficial to learners: will enhance enjoyment,

				participation and happiness.
C201	Participant 2:	"Ja, Mam I think it is very important because now you can reach each and every child according to his or her ability whereby a child can express himself or herself so that they can understand the Learning area well and to put it into practice".	Very important Reach each and every child according to his or her ability Understand Learning Area well and put it into practice	Diverse learner abilities are accommodated Will promote better understanding of Learning Areas
C202	Participant 3:	"I feel the same, because every learner is going to feel comfortable and accommodated".	Every learner is going to feel comfortable and accommodated	Sense of belonging and accommodation by all learners Learning will be non-threatening
C203	Participant 4:	"I do agree I feel better because every child will benefit and no learner will play outside, they will all enjoy.	Feel better Every child will benefit No learner will play outside They will all enjoy	Beneficial to all learners Enhance interest and enjoyment among all learners
C204	Participant 5:	"Even if it difficult for the educator but when all those learners have been accommodated you as the educator, because learners have performed well at least you feel free."	Difficult for educators Learners have performed well Feel free	Challenging to educators Will enable learners to perform better Will create a sense of

				freedom for educators
C205	Participant 6:	Did not honour the appointment.		
C206	Participant 7:	Did not honour the appointment.		
C207	Participant 8:	Did not honour the appointment.		

	Focus group 3	**Question 1a: What is your understanding of diverse learning style needs?**	**Open codes**	**Axial codes**
C208	Participant 1:	"Diverse learning is the different learning styles studies".	Different learning styles studies	Different learning styles studies
C209	Participant 2:	"Is the learning, where there is no specific way of doing things. You are not channelled to do a certain, to learn using a certain way of style, anyhow you choose to, as long as at the end of the day you have gained understanding."	No specific way in doing things Not channelled to learn in a specific way	Gain understanding in the own preferred way Learning can take place in any way, as long as you gain understanding in the end
C210	Participant 3:	"I think that this is a different style of method of a style different method of learning."	Different method of learning	Different method of learning
C211	Participant 4:	"Its when learners learn their own way, the way they understand things to achieve their own way".	Learn their own way Way they understand things To achieve their own	Individual ways of learning Achieving the same thing in different ways

			way	
C212	Participant 5:	"Maybe I can say that it means different learners learn according to their intelligences".	Learning according to intelligences	Ways in which learners learn are linked to their intelligences
C213	Participant 6:	"Ja, I agree, the learners have different intelligences and learning style is the way each learner learns different from others".	Different intelligences Learner learns different from others	Different individual ways of learning linked to intelligence
C214	Participant 7:	"I can say diverse learning styles are different styles of learning, because diverse means different".	Different styles of learning	Diverse ways of learning
C215	Participant 8:	"Yes Mam I think they have said mouthful I also agree with them".		
ROW	**Focus group 3**	**Question 1b: Which type of learning styles do you accommodate during teaching and learning in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C216	Participant 1:	"Some are slow learners, some are moderate and some are fast learners."	Slow learners Moderate learners Fast learners	Learning styles linked to learning pace
C217	Participant 2:	"It depends upon what you are teaching at that time, you can use different methods, at times you can have discussions, role-plays its all about what you are treating about at that time, but most of the time its discussion is low." Thinkers and Feelers	Depends upon what you are teaching	Learning styles depend on what you teach
C218	Participant 3:	"In my class I have few clever children and most of the class I can say they are not clever but learn very slow".	Few clever children Most of the class	Learning styles linked to learners being fast

			.....learn very slow	or slow
C219	Participant 4:	"Learning styles in my class um…I think I have many slow learners than fast learners".	Slow learners Fast learners	Learning styles linked to fast and slow learners
C220	Participant 5:	"You know Mam with me I will not say that they are slow but I can say they are very lazy they can all achieve if they work hard and be like the once others say are fast learners".	Very lazy Fast learners	Learning styles linked to learners being lazy or fast learners
C221	Participant 6:	"I think I accommodate all learners in the class according to their intelligence. When I teach I know that they are all learning differently according to their abilities".	Intelligence Abilities	Learning styles linked to intelligence and ability
C222	Participant 7:	"With me I accommodate all learners in the classroom".	All learners	All learners are accommodated
C223	Participant 8:	"All learning styles are accommodated in the class, the clever ones just finish written work faster than others but they all write the activities".	Clever ones finish written work faster	Learning tempo linked to learning styles
	Focus group 3	**Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C224	Participant 1:	"You can group them, put them in groups, they can sit in groups according to their abilities."	Group them according to their abilities	Focus on teaching to accommodate abilities of learners Ability grouping
C225	Participant 2:	"Yes, we group them according to their abilities and you have to create activities according to their abilities."	Group them according to their abilities	Provide activities to suit learners' abilities

			Create activities according to abilities	Ability grouping
C226	Participant 3:	"I group them according to their abilities so as each and everyone can take part, even the slow learners can take part. They can all take part and understand."	Group according to abilities All take part and understand	Ability grouping so that all learners can take part and understand
C227	Participant 4:	"Even if we do not group them according to their ability maybe you use a question and answer method, then at the end of the lesson you know. Know that these once are slow learners, then you give them activities according to their abilities or, you have the slow learners and fast learners you give them activities to do whilst you are busy with slow learners."	Activities according to their abilities Slow and fast learners	Learning styles are accommodated by giving activities to fast learners and then you support the slow learners
C228	Participant 5:	"Eish with me I put them according to their abilities and then mix the groups to assist others who cannot learn easily".	According to their abilities Mix the groups to assist others	Learning styles accommodated by grouping abilities Mixing abilities will allow learners to assist those who find learning difficult
C229	Participant 6:	"But I think if we group according to abilities we deprive those slow learners from learning from others the good thing is to mix them in small groups, fast learners and slow learners".	Mix fast learners and slow learners	Mixed ability grouping so that slow learners benefit from fast learners
C230	Participant 7:	"Mam you say how we accommodate these learners, what I do	All participating during	Learning styles are

		make sure that they are all participating during teaching. Everyone has a chance to speak and say something".	teaching Everyone has a chance to speak and say something	accommodated by creating opportunities for active participation by all learners
C231	Participant 8:	"Yes, all learners are accommodated in the classroom, when I teach I do not concentrate on few clever ones but I also asked the quiet ones.	Not concentrate on few clever ones Asked the quiet ones	Encourage participation by all learners : clever and quiet ones
ROW	**Focus group 3**	**Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C232	Participant 1:	"Discussion methods to those fast learners and for slow learners you can use the role-play."	Discussion Role-play	Distinguish between methods for fast and slow learners: discussion for fast learners and role-play for slow learners
C233	Participant 2:	"Mam I was saying we can also use a reading method, you can read then they read after you."	Reading method	Educator reads to students and students read after the educator
C234	Participant 3:	"Where the activity is the story, is story telling."	Story telling	Depending on the type of activity, a suitable method/strategy is

				chosen
C235	Participant 4:	"Case studies" method	Case studies	Case studies
C236	Participant 5:	"You know, Mam sometimes it depends on the topic because the child who is average may be good or best in a certain topic, or method. I teach them in a class then I break them after that because the very learners you consider slow may perform very well in a discussion then after that you will know that these are once that are struggling and you can carry on with these."	Depends on the topic Whole class teaching Discussion	Teaching methods and strategies are chosen in relation to the topic to be taught. Whole class teaching followed by discussions
C237	Participant 6:	"Yes in class, we also do researches, where they get some information, interviews, we design questions in class so that it can be easy for them to ask questions and take notes."	Research, interviews, questions, learners ask questions and take notes	Focus on learner involvement during teaching.
C238	Participant 7:	"When we use the play method, when they go outside to do physical exercises, when they play together, they run"	Play Physical exercises	Focus on methods and strategies that enhance active involvement and participation
C239	Participant 8:	"Man, we have so many methods as they have mentioned, because learners are different we use different methods to accommodate all learners".	Many methods	Use different methods because learners are different

	Focus group 3	Question 1e: Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C240	Participant 1:	"Simple, complex, because there are those learners who are slow who cannot cope with others, you just do oral questioning because that child can be able to answer you even if he or she cannot write."	Simple Complex Oral questions for slow learners	Activities are chosen based on whether a learner is fast or slow Oral questioning suits slow learners Oral questioning is suitable for learners who have trouble in expressing their thoughts in writing
C241	Participant 2:	"Fill in and missing, true or false".	Fill in true/false	Completion activities
C242	Participant 3:	"Discuss pictures, analyze pictures."	Discuss and analyze pictures	Activities that call for independent learning
C243	Participant 4:	"Even research activities"	Research	Activities that promote independent learning
C244	Participant 5:	"Other activities they do at home like home works, assignments and the researches".	Home works Assignments Researches	Individual reflective activities
C245	Participant 6:	"I also give them the practical activities like making a poster of maybe food groups; they cut different food from magazines and	Practical activities Poster	Practical activities

		place them on the poster".		
C245	Participant 7:	"Many activities that are different must be given to learners in the class for them to know how to answer different questions".	Many activities Know how to answer different questions	Variety of activities to enable learners to learn how to answer different types of questions
C246	Participant 8;	"Let us not forget in Lo we also do physical activities where learners are playing and are doing different physical activities for growth and development".	Physical activities Playing	Physical activities to enhance growth and development
	Focus group 3	**Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C247	Participant 1:	"Self-assessment, Rubric."	Self-assessment	Assessment of learning used
C248	Participant 2:	"Peer Assessment"	Peer assessment	Assessment of learning used
C249	Participant 3:	"Educator assessment."	Educator assessment	Assessment for learning used
C250	Participant 4:	"Group assessment."	Group assessment	Assessment for learning used
C251	Participant 5:	"Memorandum, checklist, self-assessment."	Checklist, memorandum Self-assessment	Educator and self-assessment methods Assessment of and for

				learning used
C252	Participant 6:	"Assessment methods that we use must suit the activities we give to learners, like when you give test there must be a memorandum that the educator will use when marking the test".	Must suit activities Test and memorandum Educator	Choice of assessment methods and strategies linked to the type of learning activity given.
C253	Participant 7:	"These learners can also use the rubric so that they can see where they still have to improve".	Rubric	Self-assessment by means of a rubric
C254	Participant 8:	"Ja all different methods can be used to assess different activities since learners do better in other activities than others".	All different methods	Different assessment methods should be used because different activities are given to learners
C255	Participant 8;	"But I think you are all right because if it is the educator who assess the learner he/she can use the rubric for example to assess the Thinkers, memorandum to mark all test written by all learners and peers can use the memorandum you see its just the same, you are saying one and the same thing".	Educator Peer Test-memorandum-educator	Self-assessment Educator assessment Peer assessment Group assessment Assessment of and for learning used
	Focus group 3	**Question 2a: What is the effect of using one teaching method on a continuous basis?**	**Axial codes**	
C256	Participant 1:	"Not all learners are listening to you; some I think is because they get bored by those learners who do not understand easily".	Not all learners are listening	Not catering for all learners

			Get bored	Boredom occurs for learners who understand easily.
C257	Participant 2:	"I think not all learners are accommodated by one method we need to use many methods for all learners to enjoy learning".	Not all learners are accommodated Use many methods for all learners to enjoy learning	If all learners are not accommodated, learning is not enjoyable
C258	Participant 3:	"Ya, one method do not accommodate all learners, others will enjoy but others will not".	Not all learners are accommodated Others will enjoy but others will not	If all learners are not accommodated, learning is not enjoyable
C259	Participant 4:	"Same method does not accommodate all learners, example when you do demonstrations only learners who like doing things enjoy the lesson, but those who like to talk will not enjoy the lesson".	Same method does not accommodate all learners Who like to talk will not enjoy (a demonstration) lesson	If a method is used that learners do not like, they will not enjoy the lesson
C260	Participant 5:	"Truly speaking Mam I just give the activity and explain to them all and some learners will do the task but the lazy ones will not complete the task".	Give the activity and explain to them all Some learners will do the task Lazy ones will not	Makes use of explanations to the class as a whole There will always be lazy learners who will

			complete the task	not complete their work
C261	Participant 6:	"With me in the class the groups work together and help each other. Another thing is that if other learners did not understand the educator method others will help".	Groups work together Help each other	Group work assists learners to support one another
C262	Participant 7:	"One method is boring we must use different methods to accommodate all learners".	One method is boring Use different methods to accommodate all learners	A variety of methods is necessary to avoid boredom
C263	Participant 8:	"Me as an educator I can also be bored by using one method every time. Learners enjoy different things we must remember".	As an educator I can also be bored Learners enjoy different things	Learners enjoy different things, therefore more than one method should be used If a variety of methods is not used on a continuous basis, learners will become bored
	Focus group 3	**Question 2b: What is the effect of using one type of learning activity on constant basis?**	**Open codes**	**Axial codes**
C264	Participant 1:	"You do not cater for all the children."	Do not cater for all the children	Using one type of learning activity does

				not cater for all the learners in a class
C265	Participant 2:	"The class will become disruptive because not all learners are interested."	Disruptive Not all learners are interested	Disruptive classes due to lack of interest
C266	Participant 3:	"Yes you do not cater for all learners, they become disruptive and at the long run you as the educator become bored."	Do not cater for all learners Disruptive The educator become bored	Not all learnes are catered Disruptive learners Educators can become bored as well when only one type of learning activity is used on a constant basis
C267	Participant 4:	"You have to change the methods because the learners who are idling will disrupt the class."	Idling (learners) will disrupt the lass	If all learners are not involved in an activity class disruptions will occur
C268	Participant 5:	"The fast learners will learn quickly, they do not have interest and also the slow learners because they do not understand anything that you are saying and without explaining anything they are not interested."	Fast learners will learn quickly, they not have interest Slow learners do not understand anything ... they are not interested	Lack of interest because of no understanding or because of working to quickly

C269	Participant 6:	"And at the end they will not pass even the test because half of the class was not serious, they did not concentrate."	Not serious They did not concentrate	Failure and lack of concentration will occur
C270	Participant 7:	"The same activity makes other learners to finish earlier and start to disturb others".	Finish earlier Disturb others	Using the same activity on a constant basis will lead to some learners finishing before others and then disturbing others
C271	Participant 8:	"Is there really a problem in giving the same activity? Oh it is good for learners and educators when they are marking and assessing they will know how learners have performed in the activity".	No problem in giving the same activity	No problem with using one type of activity. This makes marking and assessment easier
	Focus group 3	**Question 2c: What is the effect of using one type of assessment method constantly?**	**Open codes**	**Axial codes**
C272	Participant 1:	"O! Ho, you know what they copy from each other. You just find same answer from all of them. But if you asked them to explain dark! They cannot tell you anything, hay I don't know what can be done".	They copy from each other	Discourages independent thinking and working
C273	Participant 2:	"It depends upon the type of the activities, because if it is too simple, those faster ones will get it done with and become disruptive, but those that are slow will take time and at least they	It it is too simple those faster ones will get it done	Disruptions will be caused by learners for whom activities are too

		will get something from it."	Become disruptive Those that are slow will take time and will get something from it	simple as they will finish before the others
C274	Participant 3:	"If it is one activity it will not cater for all learners."	Will not cater for all learners	Not all learners are catered for
C275	Participant 4:	"The other thing you will never reach your objectives there is no way that you will be able to say I have done this because five learners have managed this and 20 did not, if you have not managed anything it means you have to go back again to do the same thing, utilization of time you know."	You will never reach your objectives	Using different assessment methods will make it difficult to achieve objectives with all the learners
C276	Participant 5:	"They would perform the same because of the type of the activity; I think they will perform better maybe if you have given them different activities, the one that cater for fast learners, average and slow learners."	They would perform the same Perform maybe better if you have given them different activities Cater for fast, average and slow learners	Encourages same performance Improved performance with the use of different activities
C277	Participant 6:	"Learners achieve according to their abilities".	Achieve according to their abilities	Learners achieve according to their abilities
C278	Participant 7:	"Learners like to check others mark and are then judging themselves based on the achievement of others which is good if	Learners like to check others marks and are	Comparing marks are easier when the same

		they can want to improve, but if it does not motivate them it is very bad".	then judging themselves	activity is given to all learners
C279	Participant 8:	No response		
	Focus group 3	**Question 3a: What is your opinion about using different teaching methods and strategies in the inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C280	Participant 1:	"Yo! Mam imagine planning for so many methods, it is too much, my opinion is that it's not a good idea at all.	Not good idea Too much	Demanding in terms of planning
C281	Participant 2:	"It is too demanding, we have many learners and many classes."	Too demanding Many learners and many classes	Overcrowding and many classes Using different teaching methods and strategies will be too demanding
C282	Participant 3:	"Yes too much and demanding hence we end up doing method one activity.	Too much and demanding	Work is too demanding
C283	Participant 4	"It is a lot of work,"	Lot of work	Will increae work load
C284	Participant 5:	"I think my opinion is that the majority will be able because we have got different methods of assessment so the bigger number will cope."	Majority will be able and will cope	Using different teaching methods and strategies will be possible
C285	Participant 6:	"It is good, because it means all the learners will be catered for you will be able to identify where you must go back and treat that as...	All learners will be catered for	All learners will be catered for

C286	Participant 7:	"My opinion is that with small classes it is a good idea, not with big classes".	With small classes it is a good idea, and not with big classes	Using a variety of teaching methods and strategies is approapriate for small classes
C287	Participant 8:	"Its good learners will and understand the methods that the educator is using"	Its good leanres will and understand the methods	Using a variety of methods and strategies will enhance learners' understanding
	Focus group 3	**Question 3b: What is your opinion about giving different learning activities in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C288	Participant 1:	"For me it is good it will accommodate all".	Good it will accommodate all	All learners are accommodated
C289	Participant 2:	"My opinion is, it is a good approach for our learners".	Good approach	Regarded as a good approach
C290	Participant 3:	"You know Mam it sounds good but when coming to planning and marking all those different activities it's a lot of work for educators. We do not have enough time to all these things and every afternoon is a workshop".	Sounds good Lot of work Do not have enough time	Good but time consuming
C291	Participant 4:	"Mam is right, this was going to benefit all learners according to their abilities, but the only thing is that the administration is also too	Benefit all learners according to their	Beneficial to learners but too much

		much for us, now if we add different activities plan and mark then! That is too much please".	abilities Administration is also too much for us	administration Will impact on planning and marking
C292	Participant 5:	"My opinion is that the idea is excellent for learners".	Excellent for learners	Excellent idea
C293	Participant 6:	"Good strategy but impossible to be implemented now, unless our workload is considered, there are so many learners in the classroom and it is not one class that you teach LO, it three or four classes, you understand".	Good strategy Impossible to be implemented now Workload to be considered Many learners	Good strategy challenges in the implementation due to overcrowding and present work load
C294	Participant 7:	"My opinion is that I forsee, change of curriculum and more workshops, too bad for educators".	Change of curriculum More workshops	Challenging as it will imply new workshops for educators and changes to the curriculum
C295	Participant 8:	"It's a good thing I agree with other people, what I can also say is that our classes are so big we do not finish marking in time what more about different activities we will not finish".	Good thing Classes are so big We will not finish	A good idea but problematic due to big classes
	Focus group 3	**Question 3c: What is your opinion regarding the use of different assessment methods and strategies in you inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C296	Participant 1:	"As we have mentioned it is a lot of work for the educator, but for learners it is ok, its fine because even for the slow learner will have	Lot of work for educators	Too much work for educators but

		something when we have different activities, they will be catered, they will benefit but for the educator again is still a lot of work."	For learners it is ok They will be catered They will benefit Lot of work	beneficial to learners
C294	Participant 2:	"Well, yes! It is a right thing actually. You will be able to know what the learner can do in different assessment."	Right thing	Will enable educators to identify what learners cannot do
C295	Participant 3:	"It is good, because with different assessment you can have err… self-assessment because its less work for me, they are going to assess themselves, or peer assessment where children assess others so for me it is ok at times it is less job, as educators."	Good Self-assessment because its less work for me At times it is less job	Less work for the educator when using self and peer assessment
C296	Participant 4:	"Yah, it is of benefit to the learners, that they will be able to assess each others 's work and then even the educator will benefit whereby even the educator will benefit because marking will be less you just attach your signature."	Of benefit to the learners They will be able to assess each others' work Educator will benefit... marking will be less	Beneficial to educators as learners will be able to assess themselves – reduce work for educators
C297	Participant 5:	"I think it will benefit both the educator and the children apart from marking, I mean with different method you accommodate all learners with different abilities, and then as an educator you yourself still go back and how you can improve on that group, maybe those who are struggling."	Benefit educator and children apart from making Accommodate all learners with different	Beneficial to educators but challenging in handling the marking of the assessment tasks

			abilities	Accommodate different learner abilities
C298	Participant 6:	"Yes, but it is time consuming, because you went for those then how time that you have, it is still difficult."	Time consuming	Time consuming
C299	Participant 7:	"My opinion is that all learners will be well assessed, so it is a good idea".	Good idea All learners will be well assessed	Acceptable as a good way of being able to assess all learners
C300	Participant 8:	Ooh! My opinion Mam is that eish! It's a lot of work though but it's a good thing, maar a lot of work".	Lot of work Good thing	Educators will be challenged by the work load it will bring
	Focus group 3	**Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C301	Participant 1:	"Even if it is difficult for the educator but when all those learners have been accommodated you as the educator, because learners have performed well at least you feel free."	It is difficult All those learners have been accommodated You feel free	Challenging for the educator All learners will be accommodated Good feeling when the performance of learners is good
C302	Participant 2:	"At times is tiring especially when you have to deal with these very slow learners and then you are not trained, or you do not know how to deal with them, you as the educator become very frustrated	Tiring Not trained Do not know how to	Challenging and causing frustration Educators lack training

		because in the past you know that they will be accommodated separately, so now we have to include them in a normal stream, we feel that even if we sympathize with them, but it is really tough."	deal with slow learners	to handle slow learners in the classroom
C303	Participant 3:	"I feel not so good about this approach. Even the preparation of the lesson it needs you a lot of time, because you have to use different books so that you get different activities so it is time consuming, too much work."	Not good Time consuming Too much work	Time consuming and too much work for educators
C304	Participant 4:	"I feel good, as long as learners are accommodated."	Good	Good feeling
C305	Participant 5:	"Accommodating all learners is a good thing no learner must be left out, all learners can learn at their own pace".	Good thing No learner must be left out All learners can learn at their own pace	Allows learners to learn at their own pace and leaves no learner out
C306	Participant 6:	"Um… I feel ok, but I think we must be work-shopped again because this is a good thing".	Ok Good thing Be work-shopped	Good, workshops needed for educators
C307	Participant 7:	"I am ok as long as the Department can also reduce number of learners in the class to be reasonable and periods it will be a good thing".	Ok Reduce number of learners and periods	Acceptable if classes can be smaller and periods be reduced
C308	Participant 8:	"It is ok, because it is a good strategy, yes we will need to be trained, truly speaking Mam we have been attending many trainings and workshops and we are tired if the Department can just give us a readymade document to do all things expected from us".	Ok Good strategy Will need to be trained Tired of workshops Give us a readymade	Will require additional training Workshops are tiring so a readymade document is preferred

			document	in showing how to deal with diverse learning style needs

	Focus group 4	**Question 1a: What is your understanding of diverse learning style needs?**	**Open codes**	**Axial codes**
C309	Participant 1:	"Different learning styles Learners learn differently from each other".	Learners learn differently	Learners learn differently
C310	Participant 2:	"It means learners are different and have their different ways of learning".	Learners are different Different ways of learning	Different learners with different ways of learning
C311	Participant 3:	"It means understanding of the learning content differently by different learners".	Understanding of learning content differently	Learners understand learning content in different ways
C312	Participant 4:	"Diverse learning is a different way of learning by different learners"	Different way of learning by different learners	Learners learn in different ways
C313	Participant 5:	"Diverse learning style refers to the way different learners understand learning different from each other"	Understand learning different	Learners' understanding of what they have to learn differ
C314	Participant 6:	"It means individual understanding of learning by each other"	Individual	Individual

			understanding of learning	understanding of learning
C315	Participant 7:	Did not honour the appointment.		
C316	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 1b: Which learning styles do you accommodate during teaching and learning in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C317	Participant 1:	Slow learner underachievers fast learners	Slow Underachievers Fast learners	Accommodation of learning styles is linked to *performance*-underachiever and *tempo* of learning slow and fast learners
C318	Participant 2:	"Learning styles in my class um..I think I have many introvert learners than extrovert learners".	Introvert Extrovert	Learning styles linked to different personalities: introverts and extroverts
C319	Participant 3:	"I have those that are slow learners and those who understand fast".	Slow Fast	Learning styles linked to tempo of learning: slow or fast
C320	Participant 4:	"De-motivated and motivated because most of those that are de-	De-motivated	Learning styles linked

		motivated are very lazy."	Motivated	to levels of motivation
C321	Participant 5:	"In my class there are achievers and underachievers".	Achievers Under-achievers	Learning styles linked to learner achievement: achievers and under-achievers
C322	Participant 6:	"Slow learners fast learners".	Slow learners Fast learners	Learning styles linked to learning tempo: slow and fast learners
C323	Participant 7:	Did not honour the appointment.		
C324	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C325	Participant 1:	I use group work, each learner is a member of a group and learn in groups	Group work	Learning styles accommodated by doing group work
C326	Participant 2:	" I group them based on their abilities each to participate actively in the group	Group them based on their abilities	Learning styles accommodated by using mixed ability grouping
C327	Participant 3:	"I group learners and give each different role to play in the group, like team leader scriber, reporter".	Group work Different role to play	Learning styles accommodated by doing group work and

				giving learners different roles to play
C328	Participant 4:	"I mix different learners in different abilities and each learner learns from others when they do activities".	Mix different abilities	Group according to different abilities
C329	Participant 5:	"Fast learners get more work and slow learners get simple work".	Faster learners-more work Slow learners -simple work	Learning styles accommodated by separating learners into groups of fast and slow learners and adapting the difficulty level of their work
C330	Participant 6:	"Yes, we group them according to their abilities to complete activities".	Group them according to their abilities	Learning styles accommodated by having mixed ability groups
C331	Participant 7:	Did not honour the appointment.		
C332	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles?**	**Open codes**	**Axial codes**
C333	Participant 1:	"Question and answer method, I use a case study and tabulate from that and learners will find answers the cases studies and the questions will not be the same as those of slow learners."	Question and answer Case study Different questions	Direct method: question and answer Indirect method: case

			for slow learners	studies Questions which vary in difficulty level
C334	Participant 2:	"I normally use, question and answer, role-play".	Question and answer Role-play	Direct method:question and answer Indirect method: role-play
C335	Participant 3:	"I use the peer teaching method where each learner teaches each other", educator method and group teaching methods	Peer teaching Educator method Group teaching	Indirect method: peer teaching, group teaching Direct method: educator
C336	Participant 4:	Questions and answer ,case studies	Question and answer Case studies	Direct method: question and answer Indirect method: case studies
C337	Participant 5:	Role-plays; demonstrations ;discussions and debates	Role-play Demonstration Discussion Debate	Indirect method: role-play, debate Independent method: discussion Direct method: demonstration
C338	Participant 6:	"Mam, we have so many methods as they have mentioned, because	Use different	Different methods are

		learners are different we use different methods to accommodate all learners".	methods Learners are different	used to accommodate all learners
C339	Participant 7:	Did not honour the appointment.		
C340	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 1e: Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Axial codes**	
C341	Participant 1:	"Making collage; posters, role-plays".	Collage; Posters, Role-plays	Practical activities: collage; posters, role-plays
C342	Participant 2:	"Debates, information collections from parents and clinics".	Debates, information collections	Practical activities: Debates, information collections
C343	Participant 3:	"Topics of discussion like TB, food, HIV"	Discussion	Interactive activities-discussion
C344	Participant 4:	"Learners debates on the topics, written acti*vi*ties, they also brainstorm".	Debate Written activities Brainstorm	Interactive activities- Debate Brainstorm
C345	Participant 5:	"Homework and class works, poster making".	Homework Class work Poster making	Individual work Practical work
C346	Participant 6:	"Group activities, do models, role-plays and demonstrations".	Group activities	Practical activities:

			Models Role-plays	model, role-plays Observation activities
C347	Participant 7:	Did not honour the appointment.		
C348	Participant 8;	Did not honour the appointment.		
	Focus group 4	**Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive Life Orientation classroom?**	**Axial codes**	
C339	Participant 1:	"I use learner to learner, the peer, and educator method that is used by the educator. Learners are using self-assessment method."	Learner to learner Peer Educator Self	Peer, Educator and self-assessment used Assessment of and for learning used
C350	Participant 2:	"Where each group is assessed by other group in the group work activities the tool will be verbal discussions".	Group	Group assessment is used to accommodate diverse learning styles Assessment for learning is used
C351	Participant 3:	"Self –assessment, Rubric."	Self-assessment, Rubric."	Self-assessment used to accommodate diverse learning styles

				Assessment for learning used to accommodate learning styles
C352	Participant 4:	Tests, examination marking sheets	Tests, examination marking sheets	Assessment of learning: Educator-tests, examination marking sheets
C353	Participant 5:	Tests and examinations, projects the tools are memorandums checklists	Tests and examinations, projects the tools are memorandums checklists	Assessment of learning: Educator-tests, examination Assessment for learning: projects
C354	Participant 6:	Portfolios, discussion class works, home works	Portfolios, discussion class works, home works	Assessment of learning: Educator-Portfolios, discussion class works, home works
C355	Participant 7:	Did not honour the appointment.		
C356	Participant 8:	Did not honour the appointment.		
C490	**Focus group 4**	**Question 2a: What is the effect of using one method of teaching on a continuous basis?**	**Axial codes**	
C357	Participant 1:	"Other learners participate and understand more than others. They do	Others learners	Certain learners will

		not understand the same".	participate and understand more than others They do not understand the same	understand more and participate more than others
C358	Participant 2:	One method, not all learners will understand. We must use different method to teach learners	Not all learners will understand	Only certain learners will understand if only one method is used
C359	Participant 3:	"I think not all learners are accommodated by one method we need to use many methods for all learners to enjoy learning".	Not all learners are accommodated Use many methods for all to enjoy learning	Not all learners will enjoy learning if only one method is used
C360	Participant 4:	"One method do not accommodate all learners, others will enjoy but others will become bored".	One method do not accommodate all learners Others will enjoy but others will become bored	The use of one method will lead to boredom among certain learners Only certain learners will enjoy teaching
C361	Participant 5:	Learners do not all participate and understand the same so, one method is not good for all learner in the classroom that is understanding	Learners do not all participate and understand the same	Not all learners will participate and understand
C362	Participant 6:	Some learner do not listen well in the class, they disturb others and	Do not listen well	The use of one

		those learners do not write class works and do not perform well,	Disturb others Do not write class works Do not perform well,	method only will lead to lack of attention, disturbances and poor performance
C363	Participant 7:	Did not honour the appointment.		
C364	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 2b: What is the effect of using one type of learning activity on a constant basis?**	**Open codes**	**Axial codes**
C365	Participant 1:	Other will get high marks ,and the other will score low marks	Other will get high marks Other will score low marks	Using one type of learning activity on a constant basis will have an effect on achievement
C366	Participant 2:	Other learners perform very well but others are struggling	Other learners perform well Others are struggling	Using one type of learning activity on a constant basis will have an effect on learner performance
C367	Participant 3:	"You do not cater for all the different learner	Not cater for all the different learner	Not all learners are accommodated
C368	Participant 4:	Learners participate actively on the activities they enjoy and do not complete those activities they do not enjoy, this affects the class performance.	Participate actively on the activities they enjoy	Attention is paid when learners enjoy what they are doing

			Do not complete activities they do not enjoy	
C369	Participant 5:	Learners concentrate only when they do the activities they like	Do the activities they like	Attention is paid to activities which learners favour
C370	Participant 6:	Not all learners participates actively, most become passive and do not pass their exams	Not all learners participate actively Most become passive Do not pass their exams	Lack of participation among learners Passivity during teaching and poor performance
C371	Participant 7:	Did not honour the appointment.		
C372	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 2c: What is the effect of using one type of assessment method constantly?**	**Open codes**	**Axial codes**
C373	Participant 1:	When I use a test other learners pass very good, others really struggle, and make them to repeat the test alone.	Other learners pass very good (test) Others really struggle –repeat the test	One type of assessment method does not benefit all learners equally
C374	Participant 2:	Learners who do not study fail the exams when you assess them	Fail the exam	The use of exams might lead to failure by some of the learners

C375	Participant 3:	The performance of other learners who are not so clever is not very good. only the group of clever ones will pass	Performance of learners who are not so clever is not very good Clever ones will pass	Only certain learners will succeed
C376	Participant 4:	Other assessment methods are too difficult for other learners. maybe we can use different assessment methods for different learner	Too difficult for other learners	Certain methods of assessment are found difficult by certain learners
C377	Participant 5:	I have seen in my class that those learners that work hard pass but the lazy fail.	Those learners that work hard pass but the lazy fail	Learners who work hard will pass, but lazy learners will fail
C378	Participant 6:	Some methods are good for other learners and not suitable for others.	Some methods are good for other learners and not suitable for others	Certain methods of assessment are suitable to some learners and not suitable to others
C379	Participant 7:	Did not honour the appointment.		
C380	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 3a: What is your opinion about using different teaching methods and strategies in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C381	Participant 1:	“Hoo! Mam that will be too much work to do, we have overcrowded	Be too much work	Too much work and

		classes, it is not simple."	Over crowded classes Not simple	challenging in terms of overcrowded classrooms
C382	Participant 2:	Different teaching methods will take more time, and we have to plan different methods again"	Different teaching methods will take more time We have to plan different methods	Using different teaching methods and strategies will be time consuming in terms of planning
C383	Participant 3:	It is too much work we cannot manage that with overcrowding classes	Too much work Cannot manage Overcrowding classes	Using different teaching methods and strategies will increase workload Difficult to manage in overcrowded classrooms
C384	Participant 4:	I think it's a good thing because every learner will benefit	Good Every learner will benefit	Beneficial to learners
C385	Participant 5:	Learners will achieve well if only planning is done well	Achieve well if planning is done well	Will improve learner achievement but has to be planned well
C386	Participant 6:	I see it as a good idea because all learners will be accommodated	Good idea All learners will be accommodated	Good idea because all learners will be accommodated

C387	Participant 7:	Did not honour the appointment.		
C388	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 3b: What is your opinion about giving different learning activities in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C389	Participant 1:	'Please mam, I am, not trying to be negative, but giving different activities is a lot of work and as we have said classes are too big to manage.	Lot of work Classes are too big to manage	Too much work to handle in classes with many learners
C390	Participant 2:	"Oh ,well , mam I think it is a good idea, if only all learners can understand and perform well"	A good idea All learners can understand and perform well	Good idea, but learners' understanding is also important to do well
C391	Participant 3:	"Too demanding mam, and too much work but no time"	Too demanding Too much work No time	Will be too demanding and time consuming
C392	Participant 4:	It is good because of different learners will benefit from different activities	Good Different learners will benefit from different activities	Will benefit all learners
C393	Participant 5:	"we do not have time, give and assess different activities we teach many classes and classes are overcrowded"	No time Many classes Overcrowded	Lack of time and overcrowding is a challenge for educators
C394	Participant 6:	For me it's good ,only if learners are few in the classroom	Good	Good if learner

			If learners are few	numbers can be reduced
C395	Participant 7:	Did not honour the appointment.		
C396	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 3c: What is your opinion regarding the use of different assessment methods and strategies in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C397	Participant 1:	I think it will be a good idea to assess different learners with differently because they learn and understand differently and answer differently.	Good idea, learners learn and understand differently and answer differently	Giving learners the opportunity to learn, understand and answer differently
C398	Participant 2:	"Yes it is a good idea for our learners, but remember mam that I have lot of learners in the classroom how are we going to assess using different assessment it is too much"	Good idea for our learners Too much	Beneficial to learners but too much work for educators
C399	Participant 3:	My opinion is that assessing learners using different assessment methods takes too much time it is time consuming	Time consuming	Educators are faced with time challenges
C400	Participant 4:	It is a good idea, and it will help educators to know how learners perform using different assessment	Good idea Will help educators to know learners performance	Good idea as educators will be able to determine learners' real performance
C401	Participant 5:	It's good but as others have said it a lot of work ,but it takes time.	Good Lot of work It takes time	Increased workload and time consuming

C402	Participant 6:	Hey, mam we are already having a lot of work with many classes and learning areas, it is too much to use different assessment methods in so many learning areas with overcrowding classes	A lot of work Many classes and learning areas Too much Overcrowding lasses	Challenging given the present workload and large learner numbers in classes
C403	Participant 7:	Did not honour the appointment.		
C404	Participant 8:	Did not honour the appointment.		
	Focus group 4	**Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C405	Participant 1:	"Not very well, if we have to assess learners differently, with different activities, mam"	Not well if we have to assess learners differently	Not well in relation to assessing learners differently
C406	Participant 2:	Accommodating learners is very good because they must all pass	Good	Good Accommodating all learners will enable them to pass
C407	Participant 3:	"Ok, as well	Ok	Ok
C408	Participant 4:	Yes! If we accommodate them they will do well and pass at the end of the year I feel good.	They will do well and pass I feel good	Accommodation is beneficial to learners as it will enhance their performance
C409	Participant 5:	With me I feel that, it is going to be a lot of work again from the	Lot of work	Too much work within

		department and we do not have enough time	Do not have enough time	limited time
C410	Participant 6:	I feel that it is good for learners but as others have said it is a lot of work	Good Lot of work	Good but a lot of work
C411	Participant 7:	Did not honour the appointment.		
C412	Participant 8:	Did not honour the appointment.		

	Focus group 5	**Question 1a: What is your understanding of diverse learning style needs?**	**Open codes**	**Axial codes**
C413	Participant 1:	"Learning style needs it whereby, in the classroom, since we have different learners, with different abilities, you have to have different ways of teaching then according to their abilities."	Different learners Different abilities Different ways of teaching	Learners different abilities who require different ways of teaching
C414	Participant 2:	"Learning style are different types of learners I the classroom or where others are moderate, therefore you need to have abilities will also be covered according to their abilities."	Different types of learners Covered according to their abilities	Learners who have different abilties
C415	Participant 3:	"It is different levels of learners in the classroom."	Different levels of learners	Different levels of learners in one classroom
C416	Participant 4:	"Learners are different in their language of communication, cultures, so they must all be catered for."	Different language of communication and	Different languages and cultures have to

			cultures They must all be catered for	be accommodated
C417	Participant 5:	"Mnr is hundred percent correct, I fully agree with him to say learning style are different learners and the way they learn".	Different learners and they way they learn	Learners learning in different ways
C418	Participant 6:	"Diverse learning styles refer to different way of learning by different learners".	Different way of learning by different learners	Different learners learning in different ways
C419	Participant 7:	""For me it means understanding of the content differently by different learners".	Understanding of the content differently by different learners	Different learners understanding learning content differently
C420	Participant 8:	"It means different abilities of learning by different learners".	Different abilities of learning	Different learners with different learning abilities
	Focus group 5	**Question 1b: Which type of learning styles do you accommodate during teaching and learning in the inclusive Life Orientation classroom?**	**Axial codes**	
C421	Participant 1:	"Me in my class I have those that are slow learners and those who understand fast, as Thinkers those who are slow you can give them their certain work to do, those who grasp quickly you can move with them."	Slow learners Fast learners Slow you can give them certain work	Learners accommodated according to their learning tempo – fast or

			Those who grasp quickly you can move with them	slow
C422	Participant 2:	"With me I have fast, moderate and slow, Doers, Watchers learners so usually those that are faster, the clever and Thinkers ones usually give them abstract work so that they cannot disturb the slow learners."	Fast, moderate and slow Doers and Watchers Fast learners: clever and Thinkers	Learners accommodated according to learning tempo: fast or slow Clever learners (Thinkers) receive abstract work
C423	Participant 3:	"In my class there are those learners that you can call intelligent, Thinkers there are those who are average and those that are very slow."	Intelligent Thinkers Average Very slow	Learners accommodated according to intelligence
C424	Participant 4:	"In my class there are those learners who learn differently from others, these learners are different, others are quicker achievers, average achievers and Doers or slow achievers."	Learners who learn differently from others Quick achievers, average achievers and slow achievers	Learning styles views as level of achievement
C425	Participant 5:	"There are different learners, others are talkative, and others are too quiet but are very intelligent". Thinkers	Talkative Quiet but very intelligent-Thinkers	Learning styles linked to learners being talkative or not Quiet learners

				regarded as intelligent Thinkers
C426	Participant 6:	"You know there are also those learners who are emotional, Feelers you ask them the question if they do not know the answer they cry but when they write in their books you will see that they are very good and clever".	Emotional Feelers If they do not know answer they cry Write in their books .....very good and clever	Learning styles linked to the ability to express an answer orally or in writing
C427	Participant 7:	"In my class I have seen the intelligent, Thinkers the moderate, Doers and the strugglers".	Intelligent Thinkers Moderate Doers Strugglers	Learning styles linked to intellingence Thinkers are intelligent Moderate intelligent learners are the Doers Learners with a low intelligence are the strugglers
C428	Participant 8:	"Like what they have said I also have those learners who are faster than others and those that are very slow".	Faster than others Those that are very slow	Learning styles viewed in relation to learning tempo- fast, slow
	Focus group 5	**Question 1c: How do you teach to accommodate diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C429	Participant 1:	"I give the quick achievers more difficult work from higher grades, the average achievers I give moderate work and slow learners simple	Quick achievers more difficult work	Adapting the difficulty level of the work

		and easy work."	Average achievers I give moderate work Slow learners simple and easy work	
C430	Participant 2:	"When coming to design activities for those learners I have to design different activities according to their abilities. We give them the activity according to their levels of understanding, of their level of performance. If they are quick achievers, their levels will be the same as the slow learner's activity, maybe this one you do practical things, these ones. Writing thing, this one oral thing like but being the same learning area."	Design different activities according to their abilities and their levels of understanding Do practical things, writing thing and oral thing	Activities designed according to learners abilities and level of performance Variety of activities: practical, writing and oral
C431	Participant 3:	"Usually what I do is a group work, I sometimes give them not according to their abilities, what I do I put those that are clever and mix them with the medium and slow learners so that they can help those who are slow ones."	Group work Not according to their abilities Medium learners help those who are slow ones	Separate learners in groups of mixed abilities Learners assist one another
C432	Participant 4:	"I usually delegate the quick achievers if I have given them task to help the average achievers and slow learners."	Delegate the quick achievers ... to help the average achievers and slow	Peer teaching, where the clever learners help the slow learners

			learners	
C433	Participant 5:	"When giving the activity in the classroom I make sure that every learner is engaged with the activity no one is not doing anything, and in this was they are all engaged and supervised".	Every learner is engaged No one is not doing anything All are engaged and supervised	Full participation by all learners Constant supervision of learners
C434	Participant 6:	"Group work, works for me because when I give them activities in groups they share and help each other and learn from each other".	Group work Share and help Learn from each other	Group work allows for sharing and peer assistance
C435	Participant 7:	"I make sure that the clever learners get more challenging exercise than the others so that I do not delay their learning and their faster learning style and they will also not get bored in the class".	Clever learners get more challenging exercise Do not delay their learning Not get bored	Work allocation according to performance in order not to delay learners who work fast and to avoid boredom
C436	Participant 8:	"I give more work to the hard workers and others get work that they can easily do and understand".	More work to hard workers Others get work that they can easily do and understand	Work allocation according to performance and understanding

	Focus group 5	Question 1d: Which teaching methods and strategies do you use to teach diverse learning styles?	Open codes	Axial codes
C437	Participant 1:	"I think the methods that can be used, I can use a strategy whereby you use the peer teaching-interactive"	Peer teaching interactive	Interactive peer teaching
C438	Participant 2:	"You can also use a question and answer-direct method, I use a case study-indirect and tabulate from that and learners will find answers the cases studied and the questions will not be the same as those of slow learners."	Question and answer, direct method Case study, indirect Questions will not be the same as those of slow learners	Direct- question and answer Indirect- case studies Vary the difficulty level of questions
C439	Participant 3:	"I use the peer teaching-interactive method where each learner teaches each other".	Peer teaching interactive	Interactive peer teaching
C440	Participant 4:	"I use group discussions and demonstrations".	Group discussion Demonstrations	Mainly indirect methods such as group discussions and direct methods such as demonstrations
C441	Participant 5:	"In my class learners work best in groups and in pairs-interactive".	Groups	Interactive work in

			Pairs Interactive	groups and in pairs
C442	Participant 6:	"The method of discussion also works very well. They learn very easy when they discuss in their groups and help each other to understand well".	Discussion Help each other to understand well	Discussions allow learners to help each other to understand
C443	Participant 7:	"With me I use all teaching methods but not at the same time, I use educator, group, peer and class teaching methods".	All teaching methods, not at the same time Educator Group Peer Whole class teaching methods	Variety of Direct and Interactive teaching methods used
C444	Participant 8:	"Like what has been said, I use the same teaching methods that can be understood by all learners like question and answer, discussions, telling and other methods depending on the lesson".	Use methods that can be understood by all learners: question and answer, discussion, telling Choice of method depends on the lesson	There are methods that are understood by all learners (question and answer, discussions, telling. Choice of methods also depends on the lesson

	Focus group 5	Question 1e: Which learning activities do you provide to accommodate diverse learning styles in your inclusive Life Orientation classroom?	Open codes	Axial codes
C445	Participant 1:	"Case studies, assignments, research, design."	Case studies, assignments, research, design.	Variety of practical activities
C446	Participant 2:	"Design and making, making collage, posters."	Design and making, making collage, posters	Practical activities
C447	Participant 3:	"Projects, tests"	Projects, tests	Independent activities
C448	Participant 4:	"Discuss pictures, analyze pictures."	"Discuss pictures, analyze pictures."	Interactive activities
C449	Participant 5:	"Other activities they do at home like home works, assignments and the researches".	Home works, assignments, researches	Variety of independent activities
C450	Participant 6:	"Mam, you know what, I provide any activity for these learners and engage them all, and it only depends who is doing well on the activity".	Provide any activity, Engage them all Depends on who is doing well on the activity	It does not depend on the activity but on who achieves well and who not
C451	Participant 7:	"Activities, Mam, we must give activities that make them actively participating like role-playing, dramas and small plays in the classroom".	Make them actively participating Role-playing,	Practical activities to enhance active involvement

			dramas, small plays	
C452	Participant 8:	"I think they have said mouthful I agree with them".	I agree	
	Focus group 5	**Question 1f: Which assessment methods and strategies do you use to assess diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C453	Participant 1:	"Rubrics, checklists "	Rubrics, checklist	Answer refers to tools and not methods and strategies
C454	Participant 2:	"It is the peer and educator method that is used by the educator. Learners are using self-assessment method."	Peer and educator Self-assessment	Assessment of anbd for learning: Peer, self and educator assessment methods
C455	Participant 3:	"If I am going to give learners the activity, there I have to write informal or formal method."	Informal and formal method	Informal and formal assessment
C456	Participant 4:	"We use tools to assess the strategies by means of tools and I can say the methods I can use are assignment, case study, test, projects, researches and tools I will use are checklist, rubric and memo."	Assignment, case study, test, projects, research, checklist, rubric, memo	Variety of assessment tasks used representative of assessment for and of learning
C457	Participant 5:	"I want to quote from what I read from years ago where we were taught different methods, when you have to say telling, direct telling, method, question and answer method."	Direct telling method Question and answer method	Educator assessment methods
C458	Participant 6:	"Assessment methods, for me are tests, exams and assignments,	Tests, exams	Independent

		here learners work independently".	assignments	assessment methods
C459	Participant 7:	"Yes, for tests and examinations we mark those using memorandums as tools".	Tests, examinations	Tests, examinations marked with memoranda Educator assessment methods
C460	Participant 8:	"Projects are also the assessment method, they do assignments and we mark them with checklists and memorandum".	Projects, assignments Marked with checklists and memorandum	Educator assessment
	Focus group 5	**Question 2a: What is the effect of using one teaching method on a continuous basis?**	**Open codes**	**Axial codes**
C468	Participant 1:	"I think Mam only one group is going to benefit out of that, maybe err let us say we are going to write a test or whatever, those clever ones are the only ones that are going to benefit, the slow learners are not."	One group is going to benefit Test: clever ones are the one that are going to benefit Slow learners are not	Not all learners will benefit
C469	Participant 2:	"It is just that the clever ones will participate more than moderate and slow ones. The slow learners do not concentrate they seem bored because they don't understand they did not understand. When telling the story and asked questions the clever ones will answer and the	Clever ones participate more than moderate and slow ones	All learners will not participate Concentration and understanding will be

		slow ones will not.”	Slow learners do not concentrate they seem bored Slow learners: do not understand Clever ones will answer	influenced
C470	Participant 3:	“Not all learners are listening to you; some I think is because they get bored by those learners who do not understand easily”.	Not all are listening THey get bored	Lack of attention and boredom
C471	Participant 4:	“I think not all learners are accommodated by one method we need to use many methods for all learners to enjoy learning”.	Not all learners are accommodated All learners to enjoy learning	Learners are not all catered for and will lead to only some learners enjoying learning
C472	Participant 5:	“Ya, one method do not accommodate all learners, others will enjoy but others will not”.	Do not accommodate all learners Others will enjoy but others will not	Some learners will not enjoy learning
C473	Participant 6:	“It's true not all learners are accommodated”.	Not all learners are accommodated	Not all learners are accommodated
C474	Participant 7:	“I agree with them different methods accommodate all children in the class”.	Accommodate all children in the class	Accommodate all learners
C475	Participant 8:	No response		

	Focus group 5	Question 2b: What is the effect of using one type of activity on a constant basis?	Open codes	Axial codes
C476	Participant 1:	"Not all learners will perform well in that activity. There are those who will perform best but others not, others will get zero's."	Not all learners will perform well	Performance will be affected
C477	Participant 2:	"The clever ones will get high marks, and the slow learners will score low marks."	Clever ones will get high marks Slow learners will score low marks	Academic achievement will be influenced
C478	Participant 3:	"The class will become disruptive because not all learners are interested."	Disruptive Not all learners are interested	Lack of interest causing disruption
C479	Participant 4:	"Yes you do not cater for all learners, they become disruptive and at the long run you as the educator become bored."	Do not cater for all learners Disruptive learners Educator become bored	Not all learners are catered for and disruptions and boredom will occur
C480	Participant 5:	"You have to change the methods because the learners who are idling will disrupt the class."	Learners who are idling will disrupt the class	Learners who are not engaged during teaching will cause disruptions
C481	Participant 6:	"Ya, the performance is different others are good others are bad".	Performance is different Others are good	Performance will be affected

			others are bad	
C482	Participant 7:	No response		
C483	Participant 8:	No response		
	Focus group 5	**Question 2c: What is the effect of using one type of assessment method constantly?**	**Open codes**	**Axial codes**
C484	Participant 1:	"Many learners are failing because justice is not done to them. We assess them all with the method suitable for the clever ones these slower ones obviously they fail, we observed that a lot of learners are failing."	Many learners are failing Justice is not done to them Assess all with method suitable for the clever ones	Poor performance and failure will be the result if one type of assessment method is used
C485	Participant 2:	"If my form of assessment is a test, I think in a test not all of them will fail, some of them will pass because tests accommodate all types of learners."	Test Not all will fail Test accommodate all types of learners	Misconception that the use of tests accommodate all learners
C486	Participant 3:	"Yes with the same assessment the clever ones are going to pass more than others, others are going to fail."	Clever ones are going to pass Others are going to fail	Performance and achievement will be affected
C487	Participant 4:	"There will be those who are going to work hard others not."	Those who are going to work hard others not	Only certain learners will work hard

C488	Participant 5:	"I think they will all achieve if other questions are easy and others are difficult".	They will all achieve Other questions are easy and others are difficult	Balance difficult and easy questions to accommodate all learners
C489	Participant 6:	"Pass Mam, I am not sure now".		
C490	Participant 7:	No response		
C491	Participant 8:	No response		
	Focus group 5	**Question 3a: What is your opinion about using different teaching methods and strategies in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C492	Participant 1:	"It is good, but too much demanding."	Good Too much demanding	Good but too demanding
C493	Participant 2:	"I think no one will be left behind because those fast learners will do theirs and the slow learners also their method:	No one will be left behind	All learners will be catered for and nobody will be left behind
C494	Participant 3:	"I think it will help learners to achieve at their own levels"'	It will help learners Achieve at their own levels	Achievement at learners' individual level
C495	Participant 4:	"It is a hell of work; we cannot manage that as mam has mentioned it's too much demanding."	Hell of work Cannot manage Too much	Too much work for educators and not manageable

			demanding	
C496	Participant 5:	"No, Mnr, it does not mean you use all methods in the same time. I think it will be good since these learners are different and learn differently".	Good Learners are different and learn differently	Good because learners learn differently
C497	Participant 6:	"I can also say it is a good idea".	Good idea	Good idea
C498	Participant 7:	"For me is just ok".	Ok	Ok
C499	Participant 8:	"Is a good thing, but how is it going to done with so many learners and big classes".	Good Many learners Big classes	Good but overcrowded classrooms is going to be a challenge
	Focus group 5	**Question 3b: What is your opinion about giving different learning activities in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C500	Participant 1:	"Because of the work load that we are having we are unable to cater for them all."	Work load Unable to cater for them all	All learners are not catered for as result of too much work for educators
C501	Participant 2:	"My opinion is that these overcrowding classes should be limited so that maybe as an educator I will be able to manage these learners."	Overcrowding classes	Overcrowded classrooms is a challenge for educators
C502	Participant 3:	"I will not be able to do that because it's too demanding."	Not be able to do that	A too demanding task

			Too demanding	
C503	Participant 4:	"My opinion is that maybe these learners can have their own classroom to be able to give different activities, if mixed them it's time consuming."	Own classroom Give different activities If mixed ... it's time consuming	Put different learners in the same class to save time in giving different activities in a mixed class
C504	Participant 5:	"To add on, marking such activities is demanding because of overcrowding."	Marking such activities is demanding Overcrowding	Will increase the marking load of educators
C505	Participant 6:	"My opinion is that it is good, but very demanding from our side and there is truly no time for that even if we want to do it".	Its good Very demanding No time for that	It is good but very demanding due to time constraints
C506	Participant 7:	"It's good, but as mam has already said there is no time we are already doing a lot".	Its good No time	Good but time is very limited
C507	Participant 8:	No response	No response	
	Focus group 5	**Question 3c: What is your opinion regarding the use of different assessment methods and strategies?**	**Open codes**	**Axial codes**
C508	Participant 1:	"I think by using different forms of assessment maybe a certain type of learners can simply understand the type of assessment more than the other form so I think it is right."	Certain type of learners can simply understand	Assessment will be more understandable to all learners
C509	Participant 2:	"Mam I realized that in practical demonstration you know they do not talk you just do things practically, then it is where they can excel with	Practical demonstration	Practical assessment will contribute to

		more marks."	Excel with more marks	higher achievement
C510	Participant 3:	"It is good you will be able to know what the learner can do in different assessment."	Good Know what the learner can do in different assessment	Different assessment methods will enable the educator to really see what learners are capable of
C511	Participant 4:	"As we have mentioned it is a lot of work for the educator, but for learners it is ok, its fine because even for the slow learner will have something when we have different activities, they will be catered, they will benefit but for the educator again is still a lot of work."	Lot of work Ok for learners Slow learner.. will be catered For the educator again is still a lot of work	Although a lot of work, slow learners will benefit
C512	Participant 5:	"My opinion is this is a lot of work, there is no time to do many assessments".	It's a lot of work No time to do many assessments	Lot of work but limited time
C513	Participant 6:	"Using different methods will help learners to be able to work hard and be prepared for higher classes and to answer tests and exams that are set externally".	Learners to be able to work hard Prepared for higher classes Answer tests and exams that are set externally	Hard work among learners will be promoted Learners will be prepared for higher grades

C514	Participant 7:	"Its good learners will feel a bit challenged and it will make them to be serious and work harder".	It's good Learners will feel a bit challenged Make them to be serious and work harder	Will provide a challenge to learners Will lead to learners working harder and being more serious about their work
C515	Participant 8:	"Yes it will benefit learners and us as educators not to stick to one method every time and learn to use other new methods every time".	Benefit learners	Beneficial to learners
	Focus group 5	**Question 4: How do you feel about accommodating diverse learning styles in your inclusive Life Orientation classroom?**	**Open codes**	**Axial codes**
C516	Participant 1:	"I do not feel well, Mam, as I have said before Mam it's demanding really."	Not well Demanding	A too demanding task
C517	Participant 2:	"It's too demanding Mam I agree."	Too demanding	Too demanding
C518	Participant 3:	"I feel that it is right, provided maybe the number of learners in class can be reduced from 20-15 learners. It can be possible to use these learning styles. The number of learners we are having now we count."	Right Number of learners can be reduced	Good but overcrowded classes is l a challenge
C519	Participant 4:	"Mam you know what I have the same feeling like Mam you know I feel pity for these learners the slow ones, presently I do not know how to handle the diverse learning style needs."	Feel pity for these learners the slow ones I do not know how to handle the diverse learning style needs	Acknowledges the importance of accommodating diverse learning style needs, but needs know-how

C520	Participant 5:	"I feel that accommodating diverse learning styles it's something that will benefit all the learners but something that makes us educators not to accommodate these learning styles is time, we do not have enough time overcrowding, and the classes are full. If you have listened to the Minister of Education talking about reducing the number of learning areas will give more time for example maybe Life Orientation will be 1hour15minutes instead of 30 minutes and that will give more time to assess all these learning styles, and also reducing the number of learners."	All learners will benefit Time Overcrowding Reducing number of learners	Beneficial to learners Challenge in terms of time and overcrowded classrooms
C521	Participant 6:	"Well, Mam with me I feel good as long as these learners can be all accommodated and work hard and achieve I feel good".	Feel good All accommodated and work hard and achieve	Good feeling to know all learners are accommodated so that they can achieve
C522	Participant 7:	"Oh well, that is what the department will want us to do, what shall we say. I feel ok about the idea but we need support also and more support".	What the department will want us to do, what shall we say Need support	Will do what the Department of Education wants
C523	Participant 8:	"Err… with me Mam I feel good, I think it is a good idea for all these learners to be accommodated and all to achieve".	Feel good Good idea All to achieve	Good feeling to accommodate all learners and enable them to achieve

APPENDIX F

SUMMARY OF THEMES

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1a Understanding learning style needs	Understanding learning style needs in terms of ability, tempo in grasping information A way of learning Pacing learning Utilizing a variety of resources Tempo in processing information Fast and slow learners	Diversity among learners Different learners learning together Different levels of mental ability Learners learning differently	Different learning styles studies Learning can take place in any way as long as you gain understanding Not channelled Different method of learning Individual ways of learning Achieving the same thing in different ways Ways in which learners learn are linked to their intelligences Different individual ways of learning linked to intelligence Diverse ways of learning	Learners learn differently Different learners with different ways of learning Learners understand learning content in different ways Learners learn in different ways Learners understanding of what they have to learn differ Individual understanding of learning	Learners with different abilities who require different ways of teaching Learners who have different abilities Different levels of learners in one classroom Different languages and cultures have to be accommodated Learners learning in different ways Different learners learning in different ways Different learners understanding learning content differently Different learners with different learning abilities	Understanding learning styles in terms of different abilities Understanding learning styles in terms of individual ways of learning Understanding learning styles in terms of the tempo with which information is processed

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1b Types of learning styles accommodated	Depends on the nature of a task Different personality types accommodated: introverts/extroverts Accommodating different senses during learning Distinguish between learners who like to talk and those who are quiet Accommodating different ways of learning: demonstrating, doing and talking Separating learners into groups of fast and slow learners	Accommodation of learning styles linked to achievement Learning styles linked to being fast or slow learner Learning styles linked to performance Two groups distinguished: talkative and consecutive	Learners accommodate are slow, moderate and fast – linked to learning pace Learning styles depend on what you teach Learners being fast or slow Learners who are lazy or fast Learning styles linked to intelligence and ability	Accommodation according to performance-underachiever and tempo slow and fast learner Accommodated according to personality-introvert and extrovert Accommodated according to levels of motivation Accommodation according to achievement-achievers and underachievers	Accommodated according to learning tempo – fast or slow Clever learners receive abstract work Accommodated according to intelligence Learning styles accommodated linked to achievement: achievement-quick achievers, average, slow achievers, Learning styles accommodated linked to learners who are talkative and those who are not Quiet learners regarded as intelligent Thinkers Emotional learners-Feelers and clever Learners with a low intelligence are the strugglers Moderate intelligent learners are Doers	Educators accommodate different learning tempos during teaching Educators accommodate different personality types during teaching Educators accommodate different levels of achievement during teaching Learning styles accommodated depend on the task being taught Different ways of learning

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1c How do you accommodate different learning style needs	Separating learners into groups of fast and slow learners	Provide each learner with a chance/opportunity for input Group activities/working in pairs accommodate diverse learning styles	Attending to learning pace/tempo Depends on what you teach Learners being fast or slow Support for slow learners Teach according to intelligence and ability	Doing group work Group learners into mixed ability groups Group work and different roles to play Group according to abilities Separating learners into groups of fast and slow learners	Adapting the difficulty level of the work Activities designed according to learners' abilities and level of performance Variety of activities: practical, writing and oral Peer teaching where the clever learners help the slow learners Full participation by all learners Constant supervision of learners Group work allows for sharing and peer assistance Work allocation according to learner performance and understanding – not to delay learners who work fast	Separating learners into groups of fast and slow learners and adapting the difficulty level of the work Group work accommodate diverse learning styles

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1d Which teaching methods and strategies do you use to teach diverse learning styles?	Verbal teaching Interactive peer teaching Discussions and demonstrations Telling stories and group discussions Interactive groups and pairs	Telling, discussion and group work Discussion, group work, peer teaching Any method suitable to activity: lecture demonstration Discussions, role-play research Group teaching, class teaching, practical	Discussion method for fast learners Role-play for slow learners Reading method Story telling Case studies Depends on the topic Whole class teaching followed by discussion Research, designing questions, taking notes Play, physical exercise	Question and answer, case study Questions not the same for fast and slow learners Question and answer, role-play Peer teaching, educator method, group teaching Questions and answer, case studies Role-plays, demonstrations, discussions, debates	Peer teaching Question and answer, case studies Questions not the same for slow and fast learners Group discussions Demonstrations Telling method Group, peer and class teaching	Variety of methods used across the classrooms of all the educators Individual educators do not vary their teaching methods and strategies Frequently used methods and strategies: **Direct:** Demonstrations, class teaching (Convergers, Divergers) **Indirect:** role-play, case studies (Divergers) **Independent:** research, discussion (Assimilators, Divergers) **Interactive:** group work, peer teaching, play (Accommodators)

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1e Which learning activities do you provide to accommodate diverse learning styles?	Variety: individual group work Practical design activities Activities to accommodate slow and fast learners Activities at different difficulty levels Class activities and activities to do at home Independent work in the form of projects and assignments	Variety of oral and written activities Debates, Assignments, Research Interviews Role-plays and demonstrations Discussions	Activities to accommodate slow and fast learners Fill-in activities, true or false Discuss and analyze pictures Research Homework, assignments, research Practical activities: making poster Activities with different types of questions Play and physical activities	Practical activities: collage, posters, role-play Debates, information collection Discussions Debates, written activities, brain storm Homework, class work, poster making Group activities, models, role-play, demonstrations Observation activities	Case studies, assignments, research, design activities Making collages and posters Projects, tests Discuss and analyze pictures Home work, assignments, research Activities are designed to engage all learners Role-play, drama, small plays	Variety of activities that focus on independent, practical and interactive work Activities to accommodate slow and fast learners at different difficulty levels Independent activities: Homework, assignments, projects, research Interactive activities: debates, role-play, discussions, brain storm Practical activities: poster making, making collages

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
1f Which assessment methods and strategies do you use to assess diverse learning style needs?	Test, examinations Group assessment Rubrics Educators marks and learners do corrections Projects Interviews Posters	Peer assessment Educator assessment Self-assessment Educator assessment with a memorandum to mark	Self-assessment Peer assessment Educator assessment Group assessment Memorandum, checklist Link assessment to type of activity given	Peer assessment Educator assessment Self-assessment Group assessment Rubrics Tests, examinations Projects Rubrics and memoranda Portfolios, discussions, class work, home work	Rubrics, checklists, Memoranda Peer assessment Educator assessment Self-assessment Informal and formal assessment Assignment Case study Test Projects Research Question and answer	A variety of assessment methods and strategies used across various schools Individual educators focus on a limited use of a variety of assessment methods and strategies Assessment approaches used: Assessment of learning: educator assessment, home work, tests, memoranda Assessment for learning: self, peer and group assessment, portfolios, projects, interviews, rubrics

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
2a What is the effect of only using one teaching method on a continuous basis?	To cater for all learners Learners are different and therefore different methods are needed Learners become familiar with one method Avoiding boredom Adhering to proper curriculum development Educators to be empowered to accommodate learning styles Progress will be hampered if learning styles are not adhered to Boredom among educators	Learners not understanding an becoming irritated Will not involve all learners and lead to boredom Nor everybody will be participating To enhance enjoyment	Not catering for all learners Boredom occurs for learners who understand easily Learning is not enjoyable There will always be lazy learners who do not complete their work Group work assists learners to support one another A variety of methods is necessary to avoid boredom Learners enjoy different things, therefore more than one method should be used Learners will become bored	Certain learners will understand more and participate more than others Not all learners will enjoy learning Boredom among certain learners Not all learners will participate and understand Lack of attention, disturbances and poor performance	Not all learners will benefit All learners will not participate Concentration and understanding will be influenced Lack of attention and boredom Only some learners will enjoy learning Not all learners are accommodated	Lack of understanding and participation during teaching and learning Lack of concentration and attention during teaching and learning Teaching and learning are experienced as boring and not enjoyable

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
2b Effect of using only one type of learning activity on a constant basis	Learners copying from one another Underachievers are protected by group work Certain learners will be exposed Weaker learners will be exposed when using one type of activity Not all learners will achieve	Classroom climates will be created where learners do not feel free Only some learners will perform well Class disruptions due to lack of interest Selective catering for the needs of specific learners	Does not cater for all learners in class Disruptive classes due to a lack of interest Not all learners are catered for Educators can become bored Lack of interest due to no understanding of working too quickly Failure and lack of concentration Some learners finishing before others and then disturbing others No problem with using one type of activity: it makes marking and assessment easier	Will have an effect on learner achievement Will have an effect on learner performance Not all learners are accommodated Attention is paid when learners enjoy what they are doing Lack of participation Passivity during teaching	Performance will be affected Academic achievement will be influenced Lack of interest causing disruptions Boredom will occur	Performance and achievement will be negatively affected Lack of interest Lack of participation during teaching Class disruptions due to selective catering for the needs of specific learners

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
2c Effect of using one type of assessment method constantly	Different levels of achievements Reliance on the work of others Quality of performance will differ Underperformance Vary difficulty level so that all learners can achieve	Giving the same answers Not being fair to all learners Diverse opinions and thinking will not be enhanced One method of assessment makes assessment difficult Diverse learners need to be given diverse opportunities to give diverse answers	Discourages independent thinking and working Disruptions caused by learners for whom activities are too simple as they will finish before the others Not all learners are catered for Difficult to achieve objectives with all the learners Encourages same performance. Improved performance with the use of different activities Learners achieve according to their abilities Comparing marks are easier when the same activity is given to learners	Does not benefit all learners equally The use of exams might lead to some learners failing Only certain learners will succeed Certain methods of assessment are found difficult by certain learners Learners who work hard will pass, but lazy learners will fail Certain methods of assessment are suitable to some learners and not suitable to others	Poor performance and failure Misconception that tests accommodate all learners Performance and achievement will be affected Only certain learners will work hard Balance difficult and easy questions to accommodate all	Diverse and independent thinking will be discouraged Impact on the quality of learner performance Assessment that is not fair to all learners

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
3a Opinion about the use of different teaching methods and strategies in Life Orientation classroom	All learners will be catered for Individualised achievement will be made possible Different levels of achievement Many methods cause confusion and loss of focus Accommodate learners who learn in different ways	All learners will be included during teaching and learning Active participation encourage by all Too demanding – therefore choose one method and treat everybody the same Using a variety of methods and strategies is demanding and unmanageable Will increase mark load and become unmanageable	Demanding in terms of planning Too demanding against the background of overcrowded classes and many classes Work is too demanding Will increase work load Will be possible All learners will be catered for Appropriate for small classes Will enhance students' understanding	Too much work and demanding in terms of overcrowded classrooms Will be time consuming in terms of planning Will increase work load Difficult to manage in overcrowded classrooms Beneficial to learners Will improve learner achievement but has to be well planned Good idea because all learners will be accommodated	Good, but too demanding All learners will be catered for and nobody will be left out Achievement at learner's individual level Too much work for educators and not manageable Good because learners learn differently Good idea Good but overcrowded classrooms will be a challenge	**Positive:** individualised teaching and achievement made possible **Negative:** holds challenges and will be demanding Increase in workload Difficult to manage in overcrowded classrooms

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
3b Opinion about giving different learning activities in Life Orientation classroom	Recognition of different ability levels Increased workload Give learners more than one chance to be successful Not possible due to time constraints Supportive of giving different activities, but in need of support to know how to do it	Positive, but will imply an increase in workload for educators Learners will benefit by mastering activities, have better understanding and enjoy what they have to do Learners can complete activities in line with their abilities Good, but challenging in terms of planning the activities and marking them Supportive, but need guidance to know how to do it	All learners are accommodated Regarded as a good approach Good, but time consuming Beneficial to learners but too much administration Will impact on planning and marking Excellent idea Good strategy Challenges in the implementation due to overcrowding and present work load Challenging: will imply new workshops for educators and changes the curriculum A good idea, but problematic due to big classes	Too much work to handle in classes with many learners Good idea, but learners' understanding is also important to do well Too demanding and time consuming Will benefit all learners Lack of time and overcrowding is a challenge for educators Good if learner numbers can be reduced	All learners are not catered for as result of too much work for educators Overcrowded classrooms is a challenge for educators A too demanding task Put different learners in the same class to save time in giving different activities in a mixed class Will increase the marking load of educators Good, but very demanding due to time constraints Good but time is very limited	**Positive about giving different learning activities:** Mastering of activities Better understanding Enjoyment Activities in line with learner abilities **Negative about giving different activities: challenging in terms of:** Time constraints Planning and marking Overcrowded and big classes Increase present work load Need guidance/workshops to know how – lack of knowledge

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
3c Opinion about the use of different assessment methods and strategies in the Life Orientation classroom	Different assessment methods must focus on assessing performance Necessary to assess according to the ability of a learner Not possible due to work overload and lack of time Difficult In need of assistance to cope with the use of different assessment methods	To avoid boredom Accommodate learners who like to do things in their own way Acknowledge the uniqueness of each learner To bring "flavour" to assessment To avoid learners losing interest and not participate Variety will increase educator work load	Too much work for educators but beneficial to learners Enable educators to identify what learners cannot do Less work for educator when using self and peer assessment Beneficial to educators: learners will be able to assess themselves. Reduce work for educators Beneficial to educators but challenging in handling and marking Accommodate different learner abilities Time consuming A good way of being able to assess all learners Educators challenged by the workload it will bring	Giving learners the opportunity to learn and answer differently Beneficial to learners but too much work for educators Good idea as educators will be able to determine learner's real performance Increased work load and time consuming Challenging given the present work load and large learner numbers in classes	Assessment more understandable to learners Practical assessment will contribute to higher achievement Enable educators to really see what learners are capable of Although a lot of work, slow learners will benefit Lot of work but limited time Hard work among learners will be promoted Learners prepared for higher grades Challenge to learners Lead to learners working harder and being more serious about their work	**Positive about the use of different assessment methods and strategies:** Assess according to ability Acknowledge uniqueness of learner Avoid loss of interest and lack of participation Reduce educator workload with peer and self-assessment Determine learners' real performance (valid) Enhance learner performance and understanding **Negative about the use of different assessment methods and strategies:** Work overload and lack of time

Question	Group 1	Group 2	Group 3	Group 4	Group 5	Theme
4 How do you feel about accommodating diverse learning styles in your inclusive classroom	Will support better preparation by educators that will benefit learners Time consuming and difficult to handle with slow and fast learners in one class Tough policy Only possible at Primary School Level Difficult with learners who experience literacy problems	Acceptable as it will be beneficial to learners Will enhance enjoyment, participation and happiness Diverse learner abilities are accommodated Promote better understanding of Learning Area Learners will feel a sense of belonging Learning will be non-threatening Enhance interest and enjoyment Challenging to educators Enable learners to perform better Sense of freedom for educators	Challenging for the educators All learners will be accommodated Good feeling when performance of learners is good Causing frustration Educators lack training to handle slow learners in classrooms Time consuming and too much work for educators Good feeling Allows learners to learn at their own pace Leaves no learner out Good, workshops needed for educators Acceptable if classes can be smaller and periods reduced Require additional training Workshops are tiring – a ready-made document is preferred	Not well in assessing learners differently Good, accommodate all learners will enable them to pass Ok Accommodation is beneficial to learners and will enhance their performance Too much work within limited time Good but a lot of work	Do not feel well, a too demanding task Too demanding Number of learners should be reduced Do not know how to handle diverse learning style needs Challenge in terms of time and overcrowded classrooms Good feeling to know all learners are accommodated so that they can achieve Will do what the Department of Education wants More support is required Good feeling to accommodate all learners and enable them to achieve Challenge to learners: working harder and being more serious about their work	Good approach, Reading, problems, Time consuming, Tough policy, Accommodation at primary only, Literacy problem

APPENDIX G

ETHICAL CLEARANCE

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: (018) 299-4900
Faks: (018) 299-4910
Web: http://www.nwu.ac.za

Ethics Committee
Tel +27 18 299 4850
Fax +27 18 293 5329
Email Ethics@nwu.ac.za

Prof Mary Grosser

22 September 2009

ETHICS APPROVAL OF PROJECT

The North-West University Ethics Committee (NWU-EC) hereby approves your project as indicated below. This implies that the NWU-EC grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the project may be initiated, using the ethics number below.

Project title: A teaching and learning programme to address learning style diversity in an inclusive Life Orientation classroom setting

Student working on project: PA Motloung

Ethics number: NWU-00044-09-A2

Approval date: 22 September 2009 **Expiry date:** 21 September 2014

Special conditions of the approval (if any): None

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following:

- *The project leader (principle investigator) must report in the prescribed format to the NWU-EC:*
  - *annually (or as otherwise requested) on the progress of the project,*
  - *without any delay in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.*
- *The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the NWU-EC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.*
- *The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date, a new application must be made to the NWU-EC and new approval received before or on the expiry date.*
- *In the interest of ethical responsibility the NWU-EC retains the right to:*
  - *request access to any information or data at any time during the course or after completion of the project;*
  - *withdraw or postpone approval if:*
    - *any unethical principles or practices of the project are revealed or suspected,*
    - *it becomes apparent that any relevant information was withheld from the NWU-EC or that information has been false or misrepresented,*
    - *the required annual report and reporting of adverse events was not done timely and accurately,*
    - *new institutional rules, national legislation or international conventions deem it necessary.*

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.Yours sincerely

Prof MMJ Lowes
(chair NWU Ethics Committee)

Prof M. Monteith
(Chairman: NWU Ethics Committee:Teaching and Learning)

Addendum G

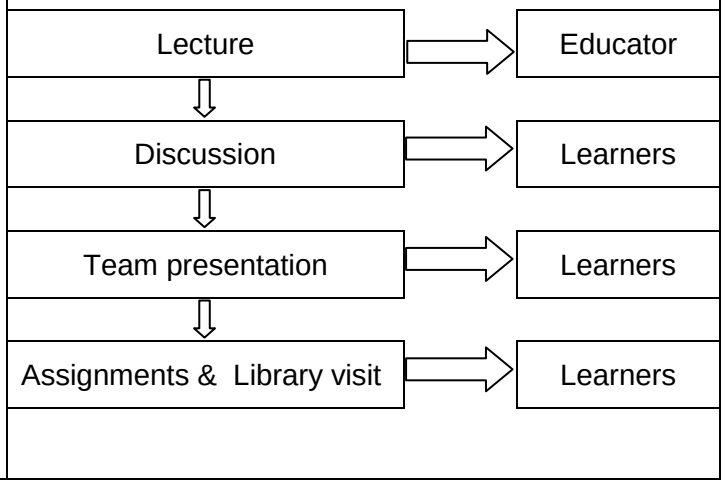
APPENDIX H

SEQUENCING OF ACTIVITIES

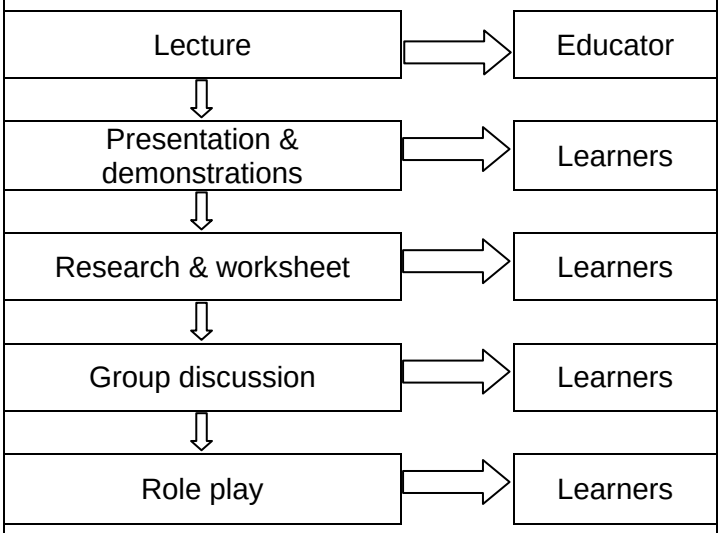
HEALTH PROMOTION

HEALTH PROMOTION The learner will be able to make informed decisions regarding personal, community and environmental health	AS :1 Investigates menus from various cultures and suggests plans for healthy meals.	**Activity 1** Discussion → Educator and learners Reading and discussion → Learners Interviews to investigation → Learners Home work to design and make → Learners Research/Interviews → Learners Assignment & presentation → Learners Project → Learners **Activity 2** Lecture & Presentation → Educator Plan & Project → Learners Role-play → Learners

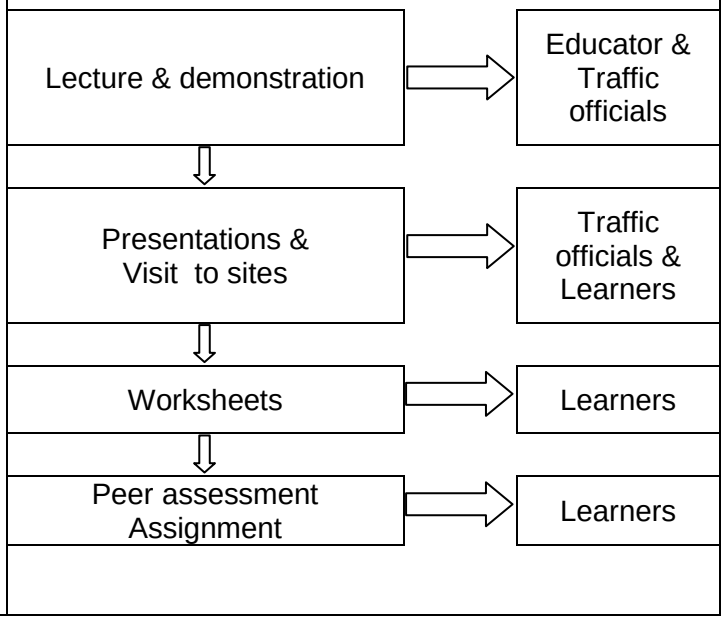
HEALTH PROMOTION

HEALTH PROMOTION Learner will be able to make informed decisions regarding personal, community and environmental	AS : 2 Explores and reports on links between a healthy environment and personal health	

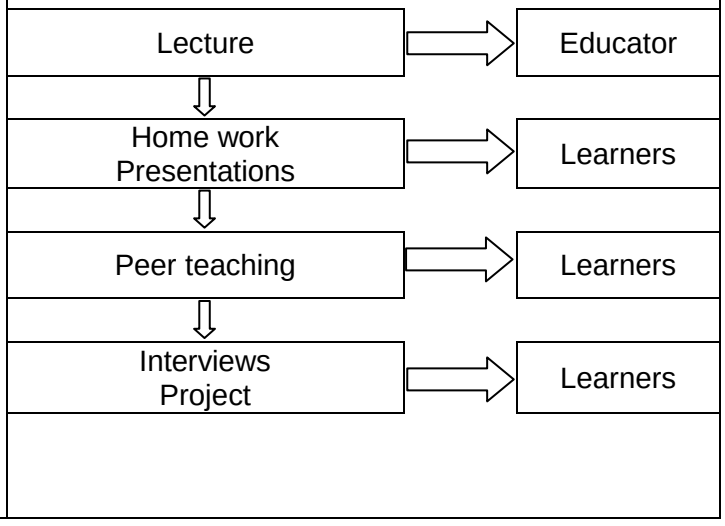
HEALTH PROMOTION

HEALTH PROMOTION The learner will be able to make informed decisions regarding personal, community and environmental health	AS: 3 Explains children's rights and responsibilities, and suggests ways in which to apply these in a familiar situations	

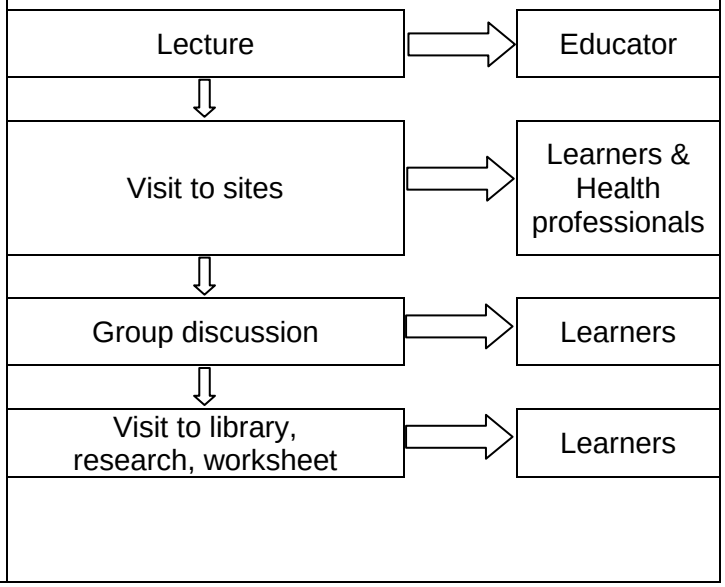
HEALTH PROMOTION

HEALTH PROMOTION The learner will be able to make informed decisions regarding personal, community and environmental health	AS : 4 Lists and explains traffic rules relevant to road users	

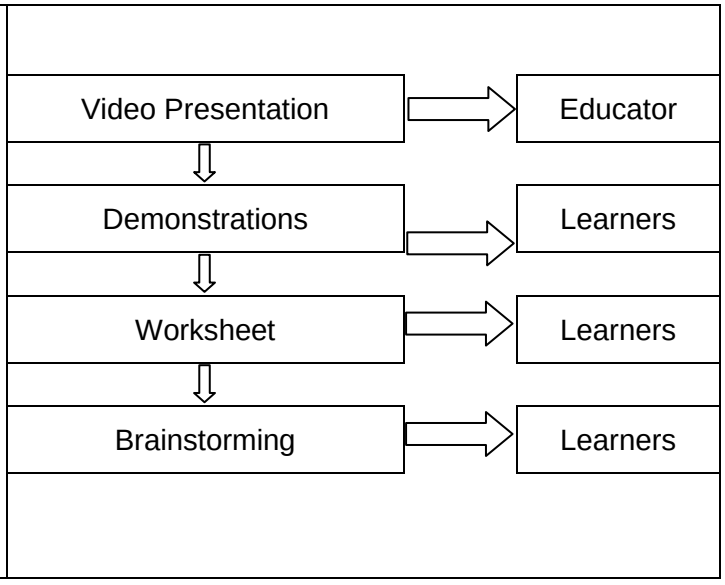
PERSONAL DEVELOPMENT

PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 1 Identifies own strengths and those of others, and explains how to convert less successful experiences into positive learning experience	

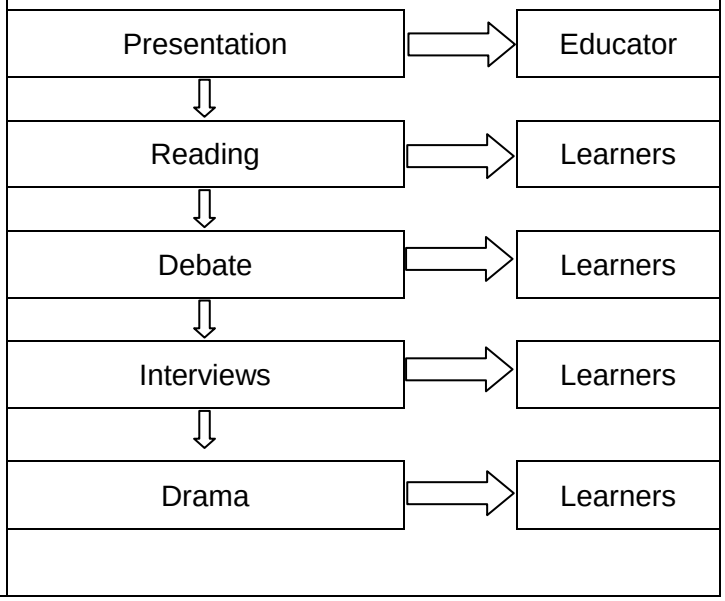
PERSONAL DEVEOLPMENT

PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 2 Explains why other persons' bodies should be respected	

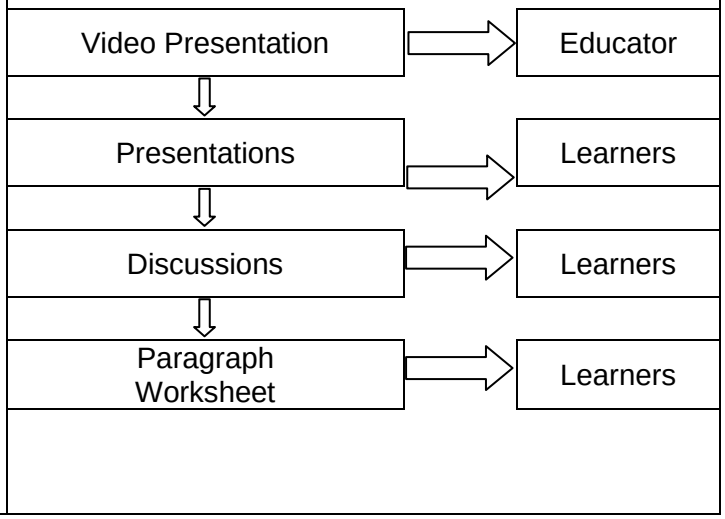
PERSONAL DEVELOPMENT

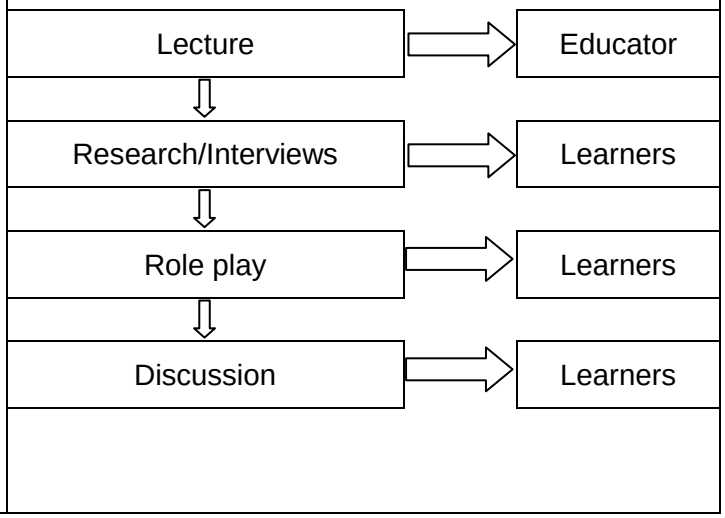
PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 3 Considers and interprets the emotions of others	

PERSONAL DEVELOPMENT

PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 4 Demonstrates the ability to select and apply in useful responses in conflict situations	

PERSONAL DEVELOPMENT

PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 5 Reflects on and learns from own personal experience of working is a group	

PERSONAL DEVELOPMENT

PERSONAL DEVELOPMENT The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world	AS : 6 Applies appropriate study skills